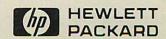
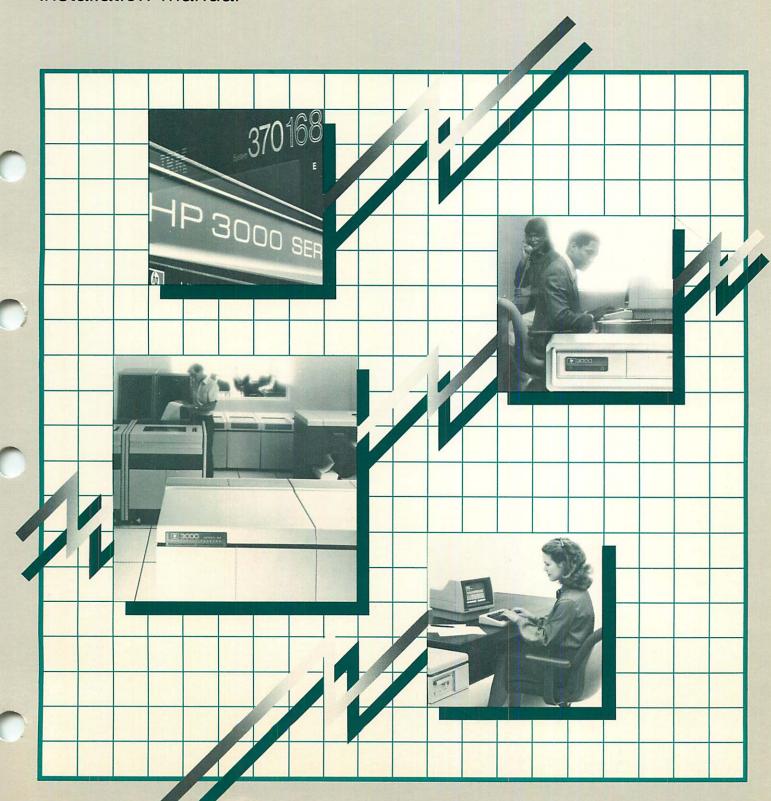
Distributed Systems Network



HP 30018A/30019A Add-On ADCC installation manual



Distributed Systems Network

HP 30018A/30019A Add-On ADCC Installation Manual



INFORMATION NETWORKS DIVISION
19420 HOMESTEAD ROAD, CUPERTINO, CALIFORNIA 95014

NOTICE

The information contained in this document is subject to change without notice.

HEWLETT-PACKARD MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance or use of this material.

Hewlett-Packard assumes no responsibility for the use or reliability of its software on equipment that is not furnished by Hewlett-Packard.

This document contains proprietary information which is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced or translated to another program language without the prior written consent of Hewlett-Packard Company.

LIST OF EFFECTIVE PAGES

The List of Effective Pages gives the date of the current edition and of any pages changed in updates to that edition. Within the manual, any page changed since the last edition is indicated by printing the date the changes were made on the bottom of the page. Changes are marked with a vertical bar in the margin. If an update is incorporated when an edition is reprinted, these bars are removed but the dates remain. No information is incorporated into a reprinting unless it appears as a prior update.

Fourth Edition Feb 1982

PRINTING HISTORY

New editions are complete revisions of the manual. Update packages, which are issued between editions, contain additional and replacement pages to be merged into the manual by the customer. The date on the title page and back cover of the manual changes only when a new edition is published. When an edition is reprinted, all the prior updates to the edition are incorporated. No information is incorporated into a reprinting unless it appears as a prior update. The edition does not change.

The software product part number printed alongside the date indicates the version and update level of the software product at the time the manual edition or update was issued. Many product updates and fixes do not require manual changes, and conversely, manual corrections may be done without accompanying product changes. Therefore, do not expect a one to one correspondence between product updates and manual updates.

First Edition												Dec 1978
Second Edition												Feb 1980
Third Edition												Mar 1981
Update No. 1												Jun 1981
Fourth Edition.												

CONTENTS

														Pa	ige
Introdu	action		• • • • • • •			 	 	 • • •	 	• • •	 	 			1
30018A	Procedure	for	Series	30/	′33.	 	 	 • • •	 		 •	 			2
30018A	Procedure	Ser	ies 40			 	 	 • • •	 		 •	 		•	3
	Procedure														
	Procedure														
3001 9 A	Procedure	for	Series	40.		 	 	 	 		 •	 	•	•	19
3001 9 A	Procedure	for	Series	44.		 	 	 	 		 •	 			20

ILLUSTRATIONS

Figure	Title	Page
1.	Processor Power Switch	. 6
2.	Series 30 Card Cage Assignments	. 7
3.	Series 33 Card Cage Assignments	
4.	Series 30 Cable Routing Area	
5.	Series 40 Cable Routing Diagram	
6.	Series 33 Terminal Panel	. 11
7.	Series 44 Mainframe (Rear View)	12
8.	Series 40 Slot Locations	. 13
9.	Series 44 Slot Locations	
	(Single Card Cage Configuration)	. 14
10.	Series 44 Slot Locations	
	(Dual Card Cage Configuration)	. 15
11.	Series 44 Side and Rear Junction Panels	
12.	Series 44 Rear Junction Panel Identification Chart.	. 17
13.	Series 44 Side Junction Panel Identification Chart.	. 17
14.	Series 30 ADCC-M to ADCC-E Interconnect	21
15.	Series 33 ADCC-M to ADCC-E Interconnect	22

TABLES

Title				P	age
Series	30	ADCC	Configuration	Matrix	23
Series	33	ADCC	Configuration	Matrix	24
Series	40	ADCC	Configuration	Matrix	25
Series	44	ADCC	Configuration	Matrix	26
	Series Series Series	Series 30 Series 33 Series 40	Series 30 ADCC Series 33 ADCC Series 40 ADCC	Series 30 ADCC Configuration Series 33 ADCC Configuration Series 40 ADCC Configuration	Title Series 30 ADCC Configuration Matrix Series 33 ADCC Configuration Matrix Series 40 ADCC Configuration Matrix Series 44 ADCC Configuration Matrix

INTRODUCTION

Upon receiving this document, contact your local Hewlett-Packard field service office to arrange for the installation of this product. Directly prior to this installation, the system operator should backup the system as described in the HP 3000 Computer Systems Console Operator's Guide (32002-90004).

This manual describes the installation activities for an 30018A Asynchronous Data Communications Controller (ADCC MAIN) or an HP 30019A Asynchronous Data Communications Controller (ADCC EXTEND) which is to be added to an installed and functional 3000/30, HP 3000/33, HP 3000/40, or HP 3000/44 computer system. installation description is intended for use by 3000/30, HPHewlett-Packard Customer Engineers trained for HP 3000/33, HP 3000/40, or HP 3000/44 computer systems.

The following paragraphs and illustrations generally describe the installation of these products.

30018A PROCEDURE FOR SERIES 30/33

This product, which will add four RS-232 terminal ports to the system, consists of the following parts:

For Series 30

31264-60001 ADCC MAIN PCA 30080-60027 Cable Assy.

For Series 33

31264-60001 ADCC MAIN PCA 5061-2502 Cable Assy.

- 1. The system should be backed up by the system operator prior to beginning the installation.
- 2. Remove processor power by turning OFF the Processor Power Switch (see figure 1).
- 3. Install the PCA assembly into the next available card cage slot for the ADCC. See figure 2 (for Series 30) or figure 3 (for Series 33 computer systems).
- 4. For a Series 33, install the quad box end of the cable assembly into next available position on Terminal Panel. For Series 30, route the cable through the Cable Ground Clamp Bar and place the Quadbox in a convenient location behind the system. See figure 4 (for Series 30) or figure 6 (for Series 33). Route the other end of the cable to the ADCC PCA and connect it to the J2 edge connector. Use other ADCCs as a model for cable routing and connection.
- 5. Select the channel number according to the appropriate configuration matrix. See table 1 (for Series 30) or table 2 (for Series 33 computer systems).
- 6. Turn Processor Power Switch to ON and run I/O MAP and the ADCC diagnostic (refer to Diagnostic Manual Set, part number 30070-60068).
- 7. Cold Start the system from the backup media, using Cold Load Option and reconfigure for added terminals. Refer to the "Functions of the Console Operator" in the Console Operator's Guide (32002-90004) if required.
- Log on to the system, using a terminal on the new channel if available, for installation verification.
- 9. Create new backup media to retain new configuration.

30018A PROCEDURE FOR SERIES 40

This product, which will add four RS-232 terminal ports to the system, consists of the following parts:

For Series 40

31264-60001	ADCC MAIN PCA
30018-60001	ADCC Modem Cable
30170-60030	CMP/ADCC Cable

- 1. The system should be backed up by the system operator prior to beginning the installation.
- 2. Remove processor power by turning OFF the Processor Power Switch (see figure 1).
- 3. The first ADCC MAIN must be installed in slot 13 so that it can be reached by the CMP cable. Slot 14 must be reserved for an ADCC-Extender. Refer to figure 8 for recommended PCA slot location.
- 4. First ADCC-Main uses the CMP/ADCC cable (30170-60030) while the rest requires the ADCC Modem Cable. Refer to figure 5 for I/O cable routing information.
- 5. Select the channel number according to the appropriate configuration matrix. See table 3.
- 6. Turn Processor Power Switch to ON and run I/O MAP and the ADCC diagnostic (refer to Diagostic Manual Set, part number 30070-60068).
- 7. Cold Start the system from the backup media, using Cold Load Option and reconfigure for added terminals. Refer to the "Functions of the Console Operator" in the Console Operator's Guide (32002-90004) if required.
- 8. Log on to the system, using a terminal on the new channel if available, for installation verification.
- 9. Create a new backup media to retain the new configuration.

30018A PROCEDURE FOR SERIES 44

This product (Option 44), which will add four RS-232 terminal ports to the system, consists of the following parts:

For Series 44

31264-60001 ADCC MAIN PCA 30021-60001 Cable Assy.

- The system should be backed up by the system operator prior to beginning the installation.
- 2. Remove processor power by turning OFF the Processor Power Switch (see figure 1).
- 3. Install the first ADCC Main PCA assembly in slot 14 of card cage 1, so that it can be reached by the CMP cable. Figure 7 shows the relative location of card cage 1 in a dual card cage configuration. Figure 9 and 10 illustrate the slot locations in single and dual card cage configurations, respectively.
- 4. Install the quad box end of the cable assembly into the next available position on the rear junction panel, routing the cable from the card cage through the access opening into the power/control area behind the rear junction panel. (Refer to figure 7, 11, and 12.) Route the other end of the cable to the ADCC PCA and connect it to the J2 edge connector. When available, use other ADCCs as a model for cable routing and connection.
- 5. Select the channel number according to the configuration matrix. (See table 4.)
- 6. Additional terminal ports can be added by installing more ADCCs. An HP 30019A ADCC Extender installed in slot 15 will add four more ports. (See "30019A Procedure for Series 44".) For further expansion, install additional ADCCs in slot locations as shown in figures 9 and 10.
- 7. Install the quad box end of the cable assembly for the additional ADCCs (step 6) in the side junction panel. Route the cable along the lower edge of the card cage(s) to the side junction panel, securing the cable with the plastic loops provided. (Refer to figures 7, 11, and 13.)
- 8. Select the channel number(s) for the additional ADDCs according to the configuration matrix. (See table 4.)

- 9. In 60-terminal systems install the fifteenth ADCC cable in one of the INP positions. (See figures 12 and 13.) There will be no conflict in this condition, since 60-terminal systems are slot-limited to only four INPs.
- 10. Turn Processor Power Switch to ON and run I/O MAP and the ADCC diagnostic (refer to Diagnostic Manual Set, part number 30070-60068).
- 11. Cold Start the system from the backup media, using Cold Load Option and reconfigure for added terminals. Refer to the "Functions of the Console Operator" in the Console Operator's Guide (32002-90004) if required.
- 12. Log on to the system, using a terminal on the new channel if available, for installation verification.
- 13. Create new backup media to retain new configuration.

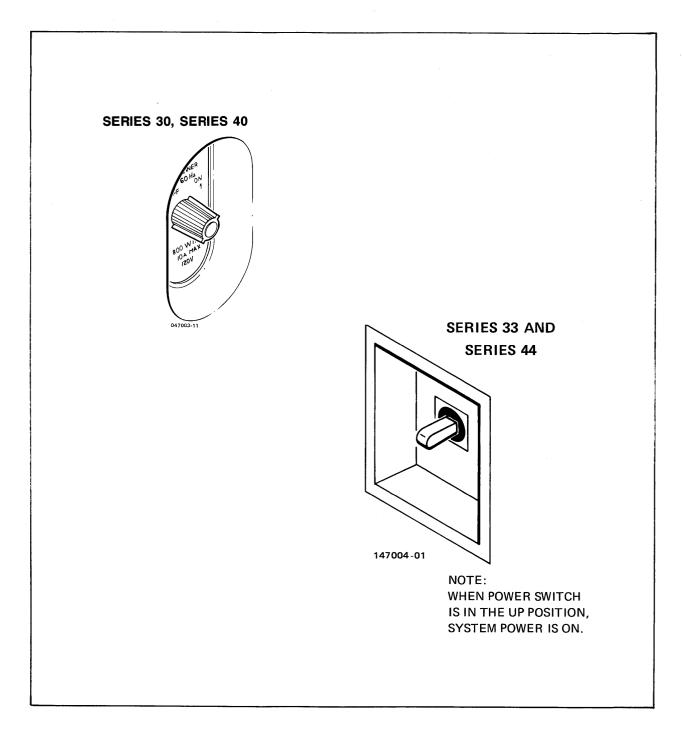


Figure 1. Processor Power Switch

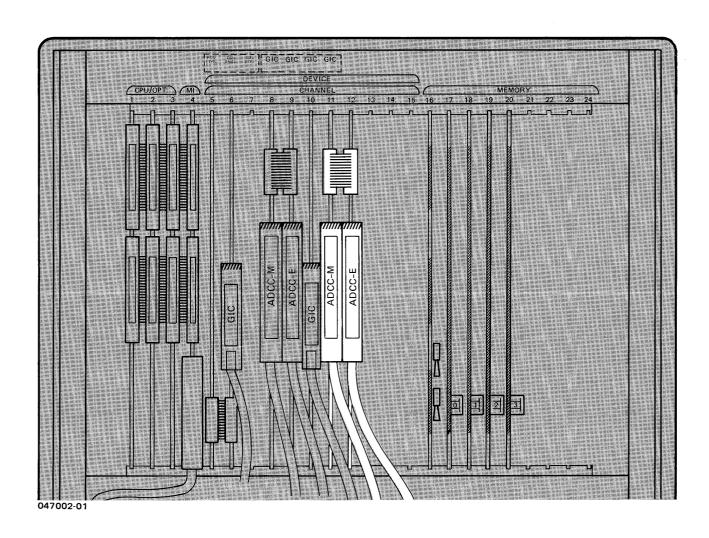


Figure 2. Series 30 Card Cage Assignments

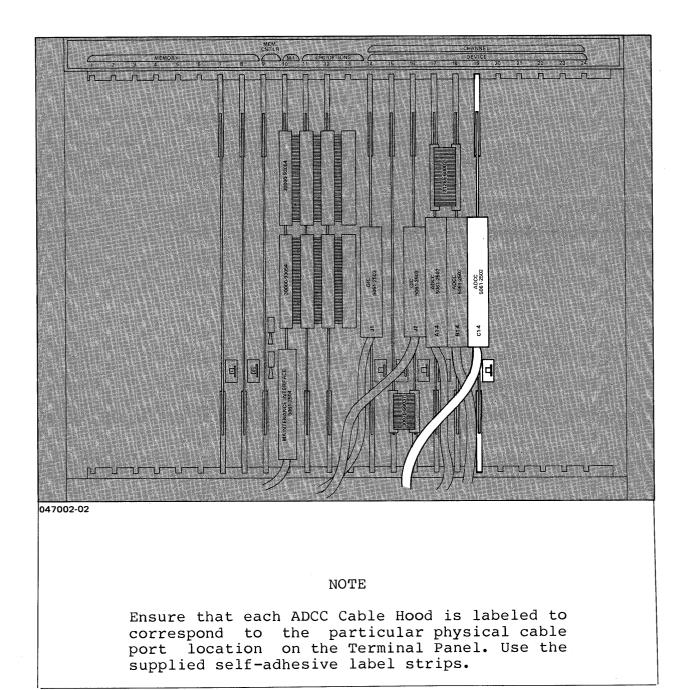
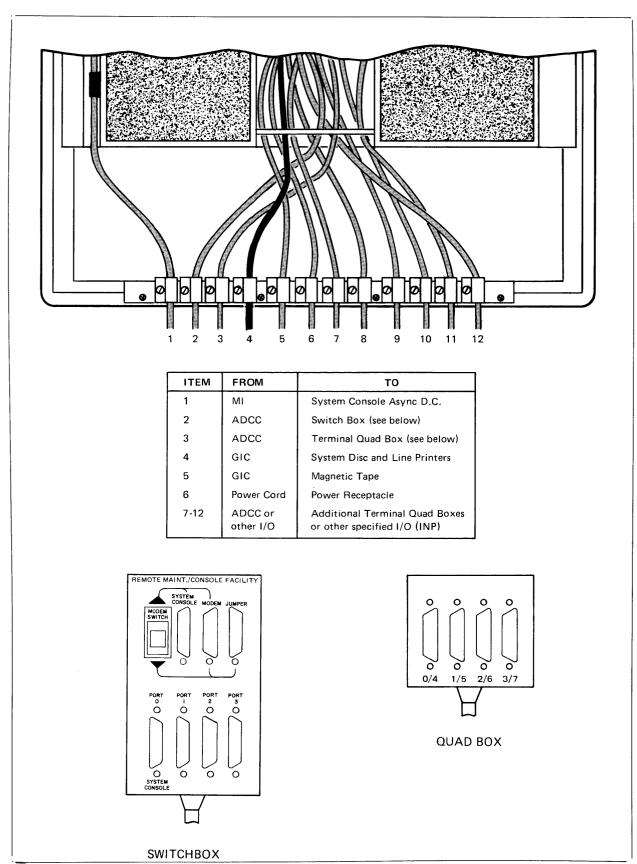
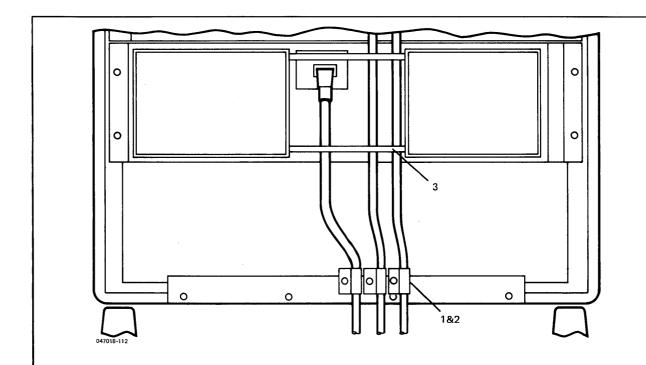


Figure 3. Series 33 Card Cage Assignments



147003-01

Figure 4. Series 30 Cable Routing Area



Notes:

- 1. External I/O cables are grounded as they enter the processor cabinet. Each cable comes with a special shield clamp on it, which contacts the cable shield. The cable clamp must be secured to the cabinet with the attached thumb screw.
- 2. The cable clamp not only serves to ground the cable but provides cable strain relief.
- 3. Use the two threaded posts to guide cables between the fan frames.
- 4. ADCC quad boxes and HP-IB connectors are placed on the floor, behind the processor.

Ensure that all connections are secure.

Figure 5. Series 40 Cable Routing Diagram

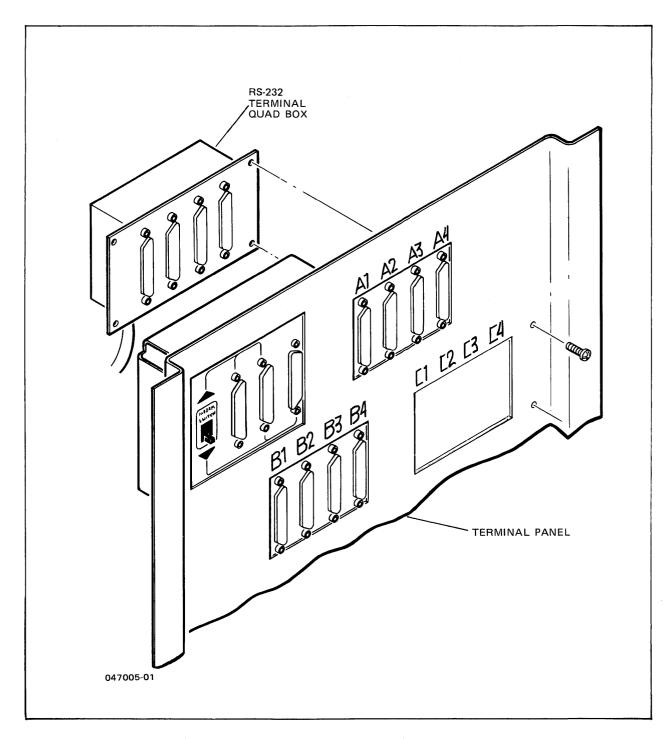


Figure 6. Series 33 Terminal Panel

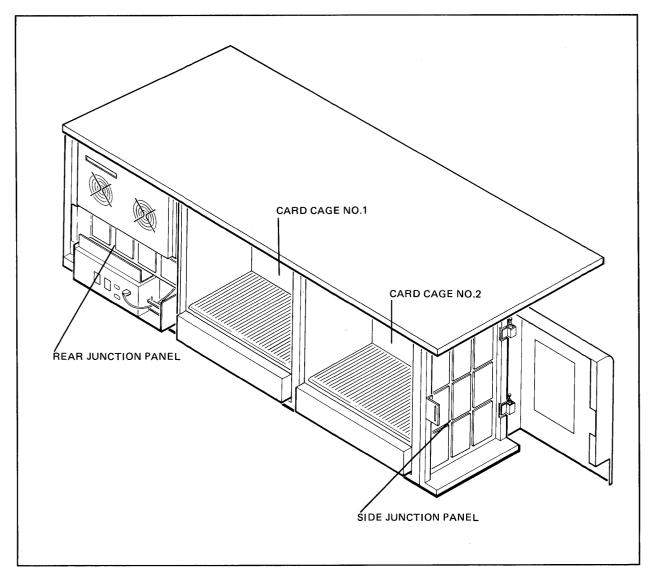


Figure 7. Series 44 Mainframe (Rear View)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
MEM ARRAY 0-256	MEM ARRAY 256-512	MEM ARRAY 512-768	MEM ARRAY 768-1024	MEMORY CONTROLLER	CMP	PCS		ALU		CTL		ADCC(M) CHAN 13	ADCC(E) CHAN 13	GIC CHAN 11	GIC CHAN 9		ALL INP'S	GIC CHAN 12 OR 13	PRINTER TRANSLATORS	ADCC(M) AND ADCC(E)			

NOTES:

- 1. GIC's must be installed in the following channel number order: 11, 9, 13, 12.
- 2. INP's and printer translator PCA's must be installed in slots adjacent to their controlling GIC.
- 3. GIC channel 9 must move to the left to make room for any new GIC's that are added.

Figure 8. Series 40 Slot Locations

MEM ARRAY 0-256	1
MEM ARRAY 256-512	2
MEM ARRAY 512-768	3
MEM ARRAY 768-1024	4
MEM ARRAY 1024-1280	5
MEM ARRAY 1280-1536	6
MEM ARRAY 1536-1792	7
MEM ARRAY 1792-2048	8
MEMORY CONTROLLER	9
CMP	2
CTL	11
ALU	12
PCS	13
ADCC M (CH 1)	14
ADCC E	15
GIC (CH 11)	16
	17 18 19 20 21
GIC (CH 9)	22 23 24

ADDITIONAL GIC'S, ADCC'S, INP'S, AND PRINTER TRANSLATORS

NOTES:

- 1. GICs must be installed in the following channel number order: 11, 9, 10, 13, 12.
- 2. INPs and printer translator PCAs must be installed in slots adjacent to their controlling GIC.
- 3. GIC channel 9 must move to the left to make room for any new GICs that are added.

147022-15

Figure 9. Series 44 Slot Locations (Single Card Cage Configuration)

-	Þ
)	D
4	
÷	
ı	_
J	ဂ္ပ
1	➣
١	G
1	m
ı	
4	_

CAR SLOT NO.

19

20 21 22

23

24

	_
MEMORY ARRAY (0-256 KB)	-
MEMORY ARRAY 256-512 KB)	2
MEMORY ARRAY (512-768 KB)	3
MEMORY ARRAY (768-1024 KB)	4
MEMORY ARRAY (1024-1280 KB)	5
MEMORY ARRAY (1280-1536 KB)	9
MEMORY ARRAY (1536-1792 KB)	7
MEMORY ARRAY (1792-2048 KB)	8
MEMORY CONTROL & LOGGING	9
WEWON' CONTROL & LOGGING)
CMP	10
	_
СМР	10
CMP CTL	10 11
CMP CTL ALU	10 11 12
CMP CTL ALU PCS	10 11 12 13
CMP CTL ALU PCS ADCC (M) (CH 1)	10 11 12 13 14 15 16
CMP CTL ALU PCS ADCC (M) (CH 1) ADCC (E) (CH 11, DEV 5)	10 11 12 13 14 15 1
CMP CTL ALU PCS ADCC (M) (CH 1) ADCC (E) (CH 11, DEV 5) GIC (CH 11)	10 11 12 13 14 15 16

ADCC (M) / INP

ADCC (E) / GIC (CH 9)

ADCC (M) / GIC (CH 10)

ADCC (E)

ADCC (M)

GIC (CH 13)

CARD CAGE

SLOT NO. ADCC (M) (CH2) ADCC (E) 2 ADCC (M) (CH3) ωп ADCC (E) т 4 (CH4) ADCC (M) 57 П ADCC (E) οт ADCC (M) / GIC (CH 12) **7** E MEMORY CONTROL & LOGGING ωт MEMORY ARRAY (3840-4096 KB) 9 m MEMORY ARRAY (3584-3840 KB) MEMORY ARRAY (3328-3584 KB) MEMORY ARRAY (3072-3328 KB) ± in m MEMORY ARRAY (2816-3072 KB) MEMORY ARRAY (2560-2816 KB) 5 m MEMORY ARRAY (2304-2560 KB) MEMORY ARRAY (2048-2304 KB) E 16 17 INP (CH 12, DEV 4) 18 18 INP (CH 12, DEV 5) 19 m INP (CH 12, DEV 6) 20 E INP (CH 12, DEV 7) 21 PTR (CH 12, DEV 3) E 22 PTR (CH 12, DEV 2) PTR (CH 12, DEV 1) PTR (CH 12, DEV 0)

NOTES:

- Afte card card any cage additional cage slots 2 14 before and **ADCCs** 15 in in card of should filling cage then the are filled be insta remaining filled, installed slot Ø ur ur
- \dot{o} to Slots ots in card cage 2 are correspond with associated designated El, E cable designations. E2, $\boldsymbol{\omega}$ ţ

Figure 10. Configuration) Series 44 Slot Locations (Dual Card Cage

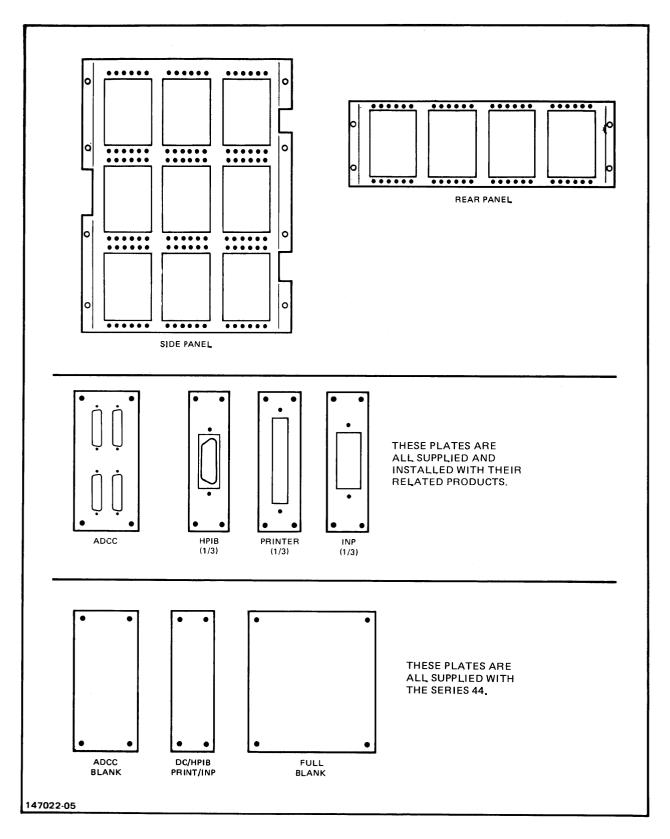


Figure 11. Series 44 Side and Rear Junction Panels

SLOT	CMP/ ADCC	TYPE	ADCC (EXT)	ADCC (MAIN)	TYPE	ADCC (EXT)	INP	INP	INP	TYPE	GIC	GIC
THE CHART CH	SLOT	SLOT	SLOT		SLOT		SLOT	SLOT	SLOT	SLOT	SLOT	SLOT 16
DEV RANGE RA	CHNL 1	СНИГ			CHNL	1		1	-	1	1"	CHNL 11
	RANGE	DEV RANGE	RANGE	RANGE	DEV RANGE	RANGE	DEV RANGE	DE V RANGE	DEV RANGE	RANGE	RANGE	DEV RANGE 0
3 - 7 3 - /	3		7	3		7				7	7	7

TYPE PTR	TYPE PTR	TYPE PTR	TYPE PTF	TYPE GIC	TYPE INP/GIC	TYPE I NP	TYPE INP	TYPE
FIN								
SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT
CHNL	CHNL	CHNL	CHNL	CHNL	CHNL	CHNL	CHNL	CHNL
11/12	11/12	11/12	11/1		11/12	12	12	12
DEV RANGE	DEV RANGE	DEV RANGE	DEV RANGE	DEV RANGE 0	DEV RANGE	DEV RANGE	DEV RANGE	DEV RANGE
				7				
TYPE ADCC	TYPE	ADCC	TYPE AD(TYPE	ADCC	TYPE ADCC	TYPE	TYPE
(MAIN)	_	(EXT)	(MA		(EXT)	(MAIN)		(EXT)
SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT
CHNL	CHNL	CHNL	CHNL	CHNL	CHNL	CHNL	CHNL	CHNL
2		2	3		3	4	_	4
DEV RANGE	DFV RANGE	DEV RANGE	DEV RANGE	DEV RANGE	DEV RANGE	DEV RANGE	DEV RANGE	DFV RANGE
0		4	0		4	0		4
3		7	3		7	3		7
			<u> </u>		1	<u></u>	•	
			TYPE	TYPE	TYPE	TYPE	TYPE	TYPE
			AD		ADCC	ADCC		ADCC (EXT)
			(MA	SLOT	(EXT)	(MAIN)	SLOT	SLOT
			3201					
			CHNL	CHNL	CHNL	CHNL	CHNL	CHNL
			5	5 —	5	6	_	6
			DEV RANGE	DEV RANGE	DEV RANGE	DEV RANGE	DEV RANGE	DEV RANGE
			C	1	4			4
			3	3	7	3		7

Figure 13. Series 44 Side Junction Panel Identification Chart

30019A PROCEDURE FOR SERIES 30/33

This product will add 4 terminal connectors to the HP 30018A add-on ADCC and consists of the following additional parts:

For Series 30

31265-60001	ADCC EXTEND PCA
30080-60027	RS-232 Cable Assembly
31265-60002	ADCC-M/ADCC-E Interconnect
	Cable

For Series 33

31265-60001	ADCC EXTEND PCA
5061-2502	RS-232 Cable Assembly
31265-60002	ADCC-M/ADCC-E Interconnect Cable

Follow the ADCC-M (30018A) installation procedure for Series 30/33 as previously described, except interconnect the J1 front edge connectors of the ADCC-M and ADCC-E PCAs via the 31265-60002 flat cable. See figure 14 (for Series 30) or figure 15 (for Series 33), and use previously installed ADCCs as a model.

NOTE

Install the ADCC MAIN and ADCC EXTEND PCAs in pairs of adjacent slots to facilitate interconnection.

30019A PROCEDURE FOR SERIES 40

This product will add 4 terminal connectors to the HP 30018A add-on ADCC and consists of the following additional parts:

For Series 40

31265-60001	ADCC EXTEND PCA
30018-60001	RS-232 Cable Assembly
31265-60002	ADCC-M/ADCC-E Interconnect
	Cable

Follow the ADCC-M (30018A) installation procedure for Series 40 as previously described, except interconnect the Jl front edge connectors of the ADCC-M and ADCC-E PCAs via the 31265-60002 flat cable.

NOTE

Install the ADCC MAIN and ADCC EXTEND PCAs in pairs of adjacent slots to facilitate interconnection.

30019A PROCEDURE FOR SERIES 44

This product (Option 44) will add 4 terminal connectors to the HP 30018A add-on ADCC and consists of the following additional parts:

For Series 44

31265-60001	ADCC EXTEND PCA
30021-60001	RS-232 Cable Assembly
31265-60002	ADCC-M/ADCC-E Interconnect
	Cable

Follow the ADCC-M (30018A) installation procedure for Series 44 as previously described, except interconnect the Jl front edge connectors of the ADCC-M and ADCC-E PCAs via the 31265-60002 flat cable. (The interconnection of the two PCA boards with the 31265-60002 flat cable for the Series 44 is the same as that part of the illustration in figure 15 for the Series 33.)

NOTE

Install the ADCC MAIN and ADCC EXTEND PCAs in pairs of adjacent slots to facilitate interconnection.

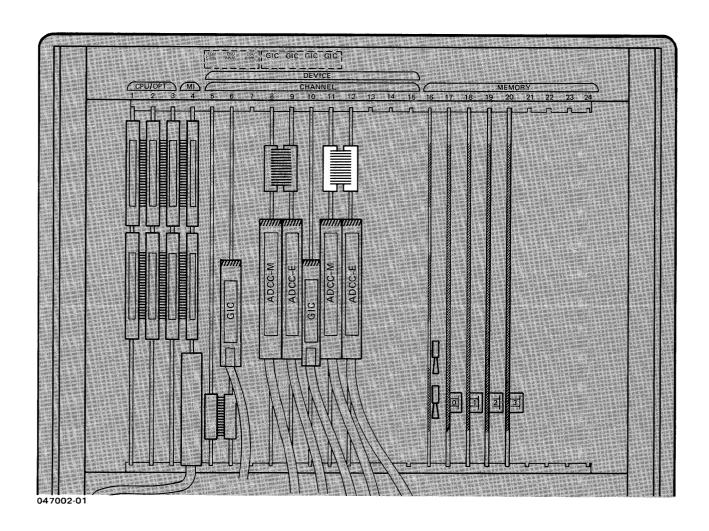


Figure 14. Series 30 ADCC-M to ADCC-E Interconnect

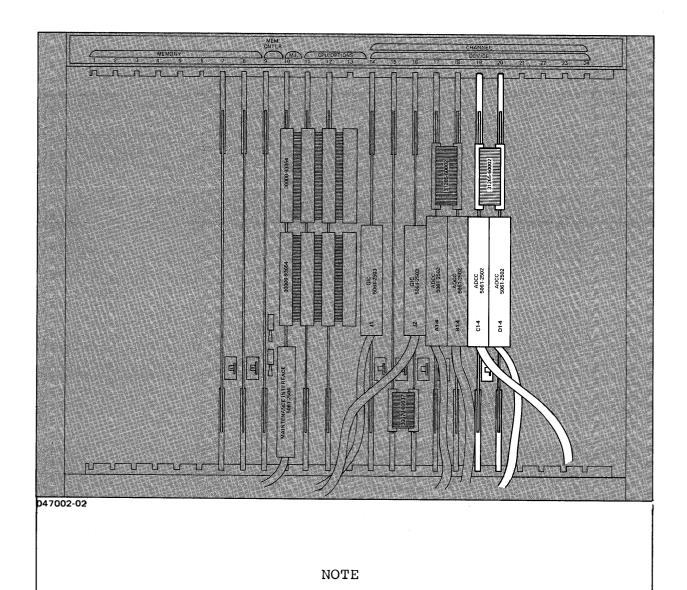


Figure 15. Series 33 ADCC-M to ADCC-E Interconnect

Ensure that each ADCC Cable Hood is labeled to

correspond to the particular physical cable port location on the Terminal Panel. Use the supplied self-adhesive label strips.

Table 1. Series 30 ADCC Configuration Matrix

Terminal Configuration

Baud: 2400 or below		
System Capacity: 32 Terminals (16 allowed using Block Mode)		
Hardware Cable Length:	50 ft.	
ADCC Channel Numbers:	Terminal Numbers	Channel Number
	1 thru 8	1
	9 thru 16	2
	17 thru 24	3
	25 thru 32	4

30019A Procedure

Table 2. Series 33 ADCC Configuration Matrix

Terminal Configuration

Baud: 2400 or below		
System Capacity: 32 Terminals (16 allowed using Block Mode)		
Hardware Cable Length:	50 ft.	
ADCC Channel Numbers:	Terminal Numbers	Channel Number
	1 thru 8	1
	9 thru 16	2
	17 thru 24	3
	25 thru 32	4

Table 3. Series 40 ADCC Configuration Matrix

Terminal Configuration

Baud: 2400 or below		
System Capacity: 32 T Bloc	erminals (16 a k Mode)	llowed using
Hardware Cable Length:	50 ft.	
ADCC Channel Numbers:	Terminal Numbers	Channel Number
	1 thru 8	1
	9 thru 16	2
	17 thru 24	3
	25 thru 32	4

Table 4. Series 44 ADCC Configuration Matrix

Terminal Configuration

Baud: 2400 or below			
	rminals (16 allowed using Mode)		
Hardware Cable Length:	Hardware Cable Length: 50 ft.		
ADCC Channel Numbers:	Terminal Channel Numbers Number		
	1 thru 8		
	9 thru 16 2		
	17 thru 24 3		
	25 thru 32 4		
	33 thru 40 5		
	41 thru 48 6		
	49 thru 56 7		
	57 thru 60 8		

READER COMMENT SHEET

HP 30018A/30019A Add-On ADCC Installation Manual 30070-90023 Feb 1982

We welcome your evaluation of this manual. Your comments and suggestions help us improve our publications. Please use additional pages if necessary. Yes No (If no, explain under Comments, below.) Is this manual technically accurate? Are the concepts and wording easy to understand? Yes No (If no, explain under Comments, below.) (If no, explain or suggest improvements Yes No Is the format of this manual convenient in size, under Comments, below.) arrangement, and readability? Comments: DATE: _____ FROM: Name Company **Address**

FOLD

FOL



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS

PERMIT NO. 1070

CUPERTINO, CALIFORNIA

POSTAGE WILL BE PAID BY ADDRESSEE

Customer Information Products Hewlett-Packard Company 19420 Homestead Road Cupertino, California 95014

Attn: DataComm Documentation Manager

FOLD

FOL

Arranged alphabetically by country



Product Line Sales/Support Key

Key Product Line

A Analytical

CM Components

C Computer Systems Sales only

CH Computer Systems Hardware Sales and Services

CS Computer Systems Software Sales and Services

E Electronic Instruments & Measurement Systems

M Medical Products

MP Medical Products Primary SRO

MS Medical Products Secondary SRO

P Personal Computation Products

Sales only for specific product line

" Support only for specific product line

IMPORTANT: These symbols designate general product line capability. They do not insure sales or support availability for all products within a line, at all locations. Contact your local sales office for information regarding locations where HP support is available for specific products.

HP distributors are printed in italics.

HEADQUARTERS OFFICES

If there is no sales office listed for your area, contact one of these headquarters offices.

NORTH/CENTRAL AFRICA

Hewlett-Packard S.A.
7, Rue du Bois-du-Lan
CH-1217 MEYRIN 2, Switzerland Tel: (022) 83 12 12
Telex: 27835 hpse
Cable: HEWPACKSA Geneve

ASIA

Hewlett-Packard Asia Ltd. 6th Floor, Sun Hung Kai Centre 30 Harbour Rd. G.P.O. Box 795 HONG KONG Tel: 5-832 3211 After Jan. 1, 1984 47th Floor, China Resources Bldg. 26 Harbour Rd., Wanchai HONG KONG

Telex: 66678 HEWPA HX Cable: HEWPACK HONG KONG

CANADA

Hewlett-Packard (Canada) Ltd. 6877 Goreway Drive MISSISSAUGA, Ontario L4V 1M8 Tel: (416) 678-9430

Telex: 610-492-4246

EASTERN EUROPE

Hewlett-Packard Ges.m.b.h. Lieblgasse 1 P.O.Box 72 A-1222 VIENNA, Austria Tel: (222) 2365110

Telex: 1 3 4425 HEPA A

NORTHERN EUROPE

Hewlett-Packard S.A. Uilenstede 475 P.O.Box 999 NL-1180 AZ AMSTELVEEN The Netherlands Tel: 20 437771

SOUTH EAST EUROPE

Hewlett-Packard S.A. 7, Rue du Bois-du-Lan CH-1217 MEYRIN 2, Switzerland Tel: (022) 83 12 12 Telex: 27835 hpse

Cable: HEWPACKSA Geneve

OTHER EUROPE

Hewlett-Packard S.A. P.O. Box 150, Rte du Nant-D'Avril CH-1217 MEYRIN 2, Switzerland Tel: (022) 83 8111

Telex: 22486 hpsa Cable: HEWPACKSA Geneve

MEDITERRANEAN AND MIDDLE EAST

Hewlett-Packard S.A. Mediterranean and Middle East Operations Atrina Centre 32 Kifissias Ave. Paradissos-Amarousion, ATHENS Greece

Greece Tel: 682 88 11 Telex: 21-6588 HPAT GR Cable: HEWPACKSA Athens

EASTERN USA

Hewlett-Packard Co. 4 Choke Cherry Road ROCKVILLE, MD 20850 Tel: (301) 258-2000

MIDWESTERN USA

Hewlett-Packard Co. 5201 Tollview Drive ROLLING MEADOWS, IL 60008 Tel: (312) 255-9800

SOUTHERN USA

Hewlett-Packard Co. 2000 South Park Place P.O. Box 105005 ATLANTA, GA 30348 Tel: (404) 955-1500

WESTERN USA

Hewlett-Packard Co. 3939 Lankershim Blvd. P.O. Box 3919 LOS ANGELES, CA 91604 Tel: (213) 506-3700

OTHER INTERNATIONAL AREAS

Hewlett-Packard Co. Intercontinental Headquarters 3495 Deer Creek Road PALO ALTO, CA 94304 Tel: (415) 857-1501 Telex: 034-8300 Cable: HEWPACK

ANGOLA

Telectra
Empresa Técnica de Equipamentos
R. Barbosa Rodrigues, 41-I DT.
Caixa Postal 6487
LUANDA
Tel: 35515,35516

ARGENTINA

Hewlett-Packard Argentina S.A. Avenida Santa Fe 2035
Martinez 1640 BUENOS AIRES
Tel: 798-5735, 792-1293
Telex: 17595 BIONAR
Cable: HEWPACKARG
A,E,CH,CS,P
Biotron S.A.C.I.M. e I.
Av Paseo Colon 221, Piso 9
1399 BUENOS AIRES
Tel: 30-4846, 30-1851
Telex: 17595 BIONAR

AUSTRALIA

Adelaide, South Australia Office

Hewlett-Packard Australia Ltd. 153 Greenhill Road PARKSIDE, S.A. 5063 Tel: 272-5911 Telex: 82536

Cable: HEWPARD Adelaide A*,CH,CM,,E,MS,P

Brisbane, Queensland Office

Hewlett-Packard Australia Ltd. 10 Payne Road THE GAP, Queensland 4061 Tel: 30-4133

Telex: 42133

Cable: HEWPARD Brisbane

A,CH,CM,E,M,P

Canberra, Australia Capital Territory Office

Hewlett-Packard Australia Ltd. 121 Wollongong Street FYSHWICK, A.C.T. 2609

Tel: 80 4244 Telex: 62650

Cable: HEWPARD Canberra

CH,CM,E,P

Melbourne, Victoria Office

Hewlett-Packard Australia Ltd. 31-41 Joseph Street BLACKBURN, Victoria 3130 Tel: 895-2895

Telex: 31-024 Cable: HEWPARD Melbourne A,CH,CM,CS,E,MS,P

Perth, Western Australia Office

Hewlett-Packard Australia Ltd. 261 Stirling Highway CLAREMONT, W.A. 6010 Tel: 383-2188 Telex: 93859 Cable: HEWPARD Perth

A,CH,CM,E,MS,P

Sydney, New South Wales Office

Hewlett-Packard Australia Ltd. 17-23 Talavera Road P.O. Box 308 NORTH RYDE, N.S.W. 2113 Tel: 887-1611 Telex: 21561 Cable: HEWPARD Sydney A,CH,CM,CS,E,MS,P

AUSTRIA

Hewlett-Packard Ges.m.b.h. Grottenhofstrasse 94 A-8052 GRAZ Tel: (0316) 291 5 66 Telex: 32375 CH,E

Hewlett-Packard Ges.m.b.h. Lieblgasse 1 P.O. Box 72 A-1222 VIENNA Tel: (0222) 23 65 11-0 Telex: 134425 HEPA A A,CH,CM,CS,E.MS,P

BAHRAIN

Green Salon P.O. Box 557 Manama BAHRAIN Tel: 255503-255950 Telex: 84419

P Wael Pharmacy P.O. Box 648 BAHRAIN

Tel: 256123 Telex: 8550 WAEL BN E.C.M

BELGIUM

Hewlett-Packard Belgium S.A./N.V. Blvd de la Woluwe, 100 Woluwedal B-1200 **BRUSSELS** Tel: (02) 762-32-00 Telex: 23-494 paloben bru A,CH,CM,CS,E,MP,P

BRAZI

Hewlett-Packard do Brasil I.e.C. Ltda. Alameda Rio Negro, 750 Alphaville 06400 BARUERI SP Tel: (011) 421.1311 Telex: (011) 33872 HPBR-BR Cable: HEWPACK Sao Paulo A,CH,CM,CS,E,M,P

Hewlett-Packard do Brasil I.e.C. Ltda. Avenida Epitacio Pessoa, 4664 22471 RIO DE JANEIRO-RJ Tel: (02l) 286.0237 Telex: 021-21905 HPBR-BR Cable: HEWPACK Rio de Janeiro

A,CH,CM,E,MS,P*

ANAMED I.C.E.I. Ltda.

Rua Bage, 103

04012 **SAO PAULO**Tel: (011) 570-5726

Telex: 021-21905 HPBR-BR

M



Arranged alphabetically by country

CANADA

Alberta

Hewlett-Packard (Canada) Ltd. 3030 3rd Avenue N.E. CALGARY, Alberta T2A 6T7 Tel: (403) 235-3100 A.CH.CM.E*.MS.P*

Hewlett-Packard (Canada) Ltd. 11120A-178th Street EDMONTON, Alberta T5S 1P2 Tel: (403) 486-6666 A,CH,CM,CS,E,MS,P

British Columbia

Hewiett-Packard (Canada) Ltd. 10691 Shellbridge Way RICHMOND,

British Columbia V6X 2W7 Tel: (604) 270-2277 Telex: 610-922-5059 A,CH,CM,CS,E*,MS,P*

Manitoba

Hewlett-Packard (Canada) Ltd. 380-550 Century Street WINNIPEG, Manitoba R3H 0Y1 Tel: (204) 786-6701 A,CH,CM,E,MS,P*

Nova Scotia

Hewlett-Packard (Canada) Ltd. P.O. Box 931 900 Windmill Road DARTMOUTH, Nova Scotia B2Y 3Z6 Tel: (902) 469-7820 CH.CM.CS.E*.MS.P*

Ontario

Hewlett-Packard (Canada) Ltd. 3325 N. Service Rd., Unit 6 BURLINGTON, Ontario P3A 2A3 Tel: (416) 335-8644 CS.M*

Hewlett-Packard (Canada) Ltd. 552 Newbold Street LONDON, Ontario N6E 2S5 Tel: (519) 686-9181 A,CH,CM,E*,MS,P*

Hewlett-Packard (Canada) Ltd. 6877 Goreway Drive MISSISSAUGA, Ontario L4V 1M8 Tel: (416) 678-9430 A,CH,CM,CS,E,MP,P

Hewlett-Packard (Canada) Ltd. 2670 Queensview Dr. OTTAWA, Ontario K2B 8K1 Tel: (613) 820-6483

A,CH,CM,CS,E*,MS,P* Hewlett-Packard (Canada) Ltd. 220 Yorkland Blvd., Unit #11 WILLOWDALE, Ontario M2J 1R5 Tel: (416) 499-9333

Quebec

Hewlett-Packard (Canada) Ltd. 17500 South Service Road Trans-Canada Highway KIRKLAND, Quebec H9J 2M5 Tel: (514) 697-4232 A,CH,CM,CS,E,MP,P* Hewlett-Packard (Canada) Ltd. Les Galeries du Vallon 2323 Du Versont Nord STE. F0Y, Quebec G1N 4C2

Tel: (418) 687-4570

CH

CHILE

Jorge Calcagni y Cia. Ltda. Av. Italia 634 Santiago Casilia 16475 SANTIAGO 9 Tel: 222-0222 Telex: Public Booth 440001 A,CM,E,M Olympia (Chile) Ltda. Av. Rodrigo de Araya 1045 Casilla 256-V

SANTIAGO 21 Tel: (02) 22 55 044 Telex: 240-565 OLYMP CL CHCS P

CHINA, People's Republic of China Hewlett-Packard Rep. Office

P.O. Box 418 1A Lane 2, Luchang St. Beiwei Rd., Xuanwu District BEIJING

Tel: 33-1947, 33-7426 Telex: 22601 CTSHP CN-Cable: 1920 A,CH,CM,CS,E,P

COLOMBIA

Instrumentación
H. A. Langebaek & Kier S.A.
Carrera 4A No. 52A-26
Apartado Aereo 6287
BOGOTA 1, D.E.
Tel: 212-1466
Telex: 44400 INST CO
Cable: AARIS Bogota
CM,E,M

Casa Humboldt Ltda. Carrera 14, No. 98-60 Apartado Aereo 51283 BOGOTA 1, D.E. Tel: 256-1686 Telex: 45403 CCAL CO.

COSTA RICA

Cientifica Costarricense S.A. Avenida 2, Calle 5 San Pedro de Montes de Oca Apartado 10159 SAN JOSE Tel: 24-38-20, 24-08-19

Tel: 24-38-20, 24-08-19 Telex: 2367 GALGUR CR CM,E,M

CYPRUS

Telerexa Ltd. P.O. Box 4809 14C Stassinos Avenue NICOSIA Tel: 62698 Telex: 2894 LEVIDO CY E.M.P

DENMARK

Hewlett-Packard A/S Datavej 52 DK-3460 BIRKEROD Tel: (02) 81-66-40 Telex: 37409 hpas dk A,CH,CM,CS,E,MS,P Hewlett-Packard A/S Rolighedsvej 32 DK-8240 RISSKOV, Aarhus Tel: (06) 17-60-00 Telex: 37409 hpas dk CH.E

DOMINICAN REPUBLIC

Microprog S.A. Juan Tomás Mejía y Cotes No. 60 Arroyo Hondo SANTO DOMINGO Tel: 565-6268 Telex: 4510 ARENTA DR (RCA) P

ECUADOR

CYEDE Cia. Ltda. Avenida Eloy Alfaro 1749 Casilla 6423 CCI QUITO Tel: 450-975, 243-052 Telex: 2548 CYEDE ED CM,E,P

Hospitalar S.A. Robles 625 Casilla 3590 **QUITO**

Tel: 545-250, 545-122 Telex: 2485 HOSPTL ED Cable: HOSPITALAR-Quito

EGYPT

International Engineering Associates 24 Hussein Hegazi Street Kasr-et-Aini CAIRO Tel: 23829, 21641 Telex: IEA UN 93830 CH,CS,E,M EGYPOR P.O.Box 2558 42 El Zahraa Street CAIRO, Egypt Tel: 65 00 21

EL SALVADOR

Telex: 93 337

IPESA de El Salvador S.A. 29 Avenida Norte 1216 SAN SALVADOR Tel: 26-6858, 26-6868 Telex: 20539 IPESASAL A.CH.CM.CS.E.P

FINLAND Hewlett-Packard Oy

Revontulentie 7 PL 24 SF-02101 ESP00 10 Tel: (90) 4550211 Telex: 121563 hewpa sf CH.CM.CS.P Hewlett-Packard Oy (Olarinluoma 7) PL 24 02101 ESPOO 10 Tel: (90) 452 1022 A,E,MS Hewlett-Packard Oy Aatoksenkatv 10-C SF-40720-72 JYVASKYLA Tel: (941) 216318 CH Hewlett-Packard Oy

Hewlett-Packard Oy Kainvuntie 1-C SF-90140-14 OULU Tel: (981) 338785 CH

FRANCE

Hewlett-Packard France
Z.I. Mercure B
Rue Berthelot
F-13763 Les Milles Cedex
AIX-EN-PROVENCE
Tel: 16 (42) 59-41-02
Telex: 410770F
A,CH,E,MS,P*
Hewlett-Packard France
64, rue Marchand Saillant
F-61000 ALENCON
Tel: 16 (33) 29 04 42

F-61000 ALENCON
Tel: 16 (33) 29 04 42
Hewlett-Packard France
Boile Postale 503
F-25026 BESANCON
28 rue de la Republique
F-25000 BESANCON
Tel: 16 (81) 83-16-22
CH,M

Hewlett-Packard France
13, Place Napoleon III
F-29000 BREST
Tel: 16 (98) 03-38-35
Hewlett-Packard France
Chemin des Mouilles
Boite Postale 162
F-69130 ECULLY Cedex (Lyon)
Tel: 16 (78) 833-81-25
Telex: 310617F
A,CH,CS,E,MP

Hewlett-Packard France Tour Lorraine Boulevard de France F-91035 EVRY Cedex Tel: 16 6 077-96-60 Telex: 692315F E

Hewlett-Packard France Parc d'Activite du Bois Briard Ave. du Lac F-91040 EVRY Cedex Tel: 16 6 077-8383 Telex: 692315F E

Hewlett-Packard France 5, avenue Raymond Chanas F-38320 EYBENS (Grenoble) Tel: 16 (76) 25-81-41 Tel: 25-80124 HP GRENOB EYBE

Hewlett-Packard France
Centre d'Affaire Paris-Nord
Bâtiment Ampère 5 étage
Rue de la Commune de Paris
Boite Postale 300
F-93 153 LE BLANC MESNIL
Tel: 16 (1) 865-44-52
Telex: 211032F
CH,CS,E,MS
Hewlett-Packard France
Parc d'Activités Cadera
Quartier Jean Mermoz

Quartier Jean Mermoz Avenue du Président JF Kennedy F-33700 MERIGNAC (Bordeaux) Tel: 16 (56) 34-00-84 Telex: 550105F CH,E,MS Hewlett-Packard France Immueble "Les 3 B"

Nouveau Chemin de la Garde ZAC de Bois Briand F-44085 NANTES Cedex Tel: 16 (40) 50-32-22 CH**

Arranged alphabetically by country

FRANCE (Cont'd)

Hewlett-Packard France 125, rue du Faubourg Bannier F-45000 ORLEANS Tel: 16 (38) 68 01 63 Hewlett-Packard France Zone Industrielle de Courtaboeuf Avenue des Tropiques F-91947 Les Ulis Cedex ORSAY Tel: (6) 907-78-25 Telex: 600048F A,CH,CM,CS,E,MP,P Hewlett-Packard France

Paris Porte-Maillot 15, Avenue de L'Amiral Bruix F-75782 PARIS CEDEX 16 Tel: 16 (1) 502-12-20 Telex: 613663F CH.MS.P

Hewlett-Packard France 124. Boulevard Tourasse F-64000 PAU

Tel: 16 (59) 80 38 02 Hewlett-Packard France 2 Allée de la Bourgonnette F-35100 RENNES Tel: 16 (99) 51-42-44

Telex: 740912F CH.CM.E.MS.P* Hewlett-Packard France

98 Avenue de Bretagne F-76100 ROUEN Tel: 16 (35) 63-57-66 CH**,CS

Hewlett-Packard France 4 Rue Thomas Mann Boite Postale 56

F-67033 STRASBOURG Cedex Tel: 16 (88) 28-56-46

Telex: 890141F CH.E.MS.P* Hewlett-Packard France

Le Péripole 20. Chemin du Pigeonnier de la

Cépière F-31083 TOULOUSE Cedex

Tel: 16 (61) 40-11-12 Telex: 531639F A,CH,CS.E.P Hewlett-Packard France

9. rue Baudin F-26000 VALENCE Tel: 16 (75) 42 76 16

Hewlett-Packard France Carolor

ZAC de Bois Briand F-57640 VIGY (Metz) Tel: 16 (8) 771 20 22

Hewlett-Packard France Immeuble Péricentre F-59658 VILLENEUVE D'ASCQ Cedex Tel: 16 (20) 91-41-25 Telex: 160124F CH,E,MS,P1

GERMAN FEDERAL REPUBLIC

Hewlett-Packard GmbH Geschäftsstelle Keithstrasse 2-4 D-1000 BERLIN 30 Tel: (030) 24-90-86 Telex: 018 3405 hpbln d A,CH,E,M,P

Hewlett-Packard GmbH Geschäftsstelle Herrenberger Strasse 130 D-7030 BÖBLINGEN Tel: (7031) 14-0 Telex: A,CH,CM,CS,E,MP,P

Hewlett-Packard GmbH Geschäftsstelle Emanuel-Leutze-Strasse 1 D-4000 DUSSELDORF

Tel: (0211) 5971-1 Telex: 085/86 533 hpdd d A,CH,CS,E,MS,P

Hewlett-Packard GmbH Geschäftsstelle Schleefstr. 28a

D-4600 DORTMUND-Aplerbeck Tel: (0231) 45001

Hewlett-Packard GmbH Vertriebszentrale Frankfurt Berner Strasse 117 Postfach 560 140 D-6000 FRANKFURT 56 Tel: (0611) 50-04-1 Telex: 04 13249 hpffm d

A,CH,CM,CS,E,MP,P Hewlett-Packard GmbH Geschäftsstelle Aussenstelle Bad Homburg Louisenstrasse 115

D-6380 BAD HOMBURG Tel: (06172) 109-0

Hewlett-Packard GmbH Geschäftsstelle Kapstadtring 5 D-2000 HAMBURG 60 Tel: (040) 63804-1 Telex: 021 63 032 hphh d A,CH,CS,E,MS,P

Hewlett-Packard GmbH Geschäftsstelle Heidering 37-39 D-3000 HANNOVER 61 Tel: (0511) 5706-0

Telex: 092 3259 A.CH.CM,E.MS,P Hewlett-Packard GmbH

Geschäftsstelle Rosslauer Weg 2-4 D-6800 MANNHEIM Tel: (0621) 70050 Telex: 0462105

A,C,E

Hewlett-Packard GmbH Geschäftsstelle Messerschmittstrasse 7 D-7910 NEU ULM Tel: 0731-70241 Telex: 0712816 HP ULM-D

A,C,E* Hewlett-Packard GmbH Geschäftsstelle Ehhericherstr. 13 D-8500 NÜRNBERG 10 Tel: (0911) 5205-0 Telex: 0623 860 CH,CM,E,MS,P

Hewlett-Packard GmbH Geschäftsstelle Eschenstrasse 5 **D-8028 TAUFKIRCHEN** Tel: (089) 6117-1 Telex: 0524985 A,CH,CM,E,MS,P

GREAT BRITAIN See United Kingdom

GREECE

Kostas Karaynnis S.A. 8 Omirou Street ATHENS 133 Tel: 32 30 303, 32 37 371 Telex: 215962 RKAR GR A,CH,CM,CS,E,M,P PLAISIO S.A. G. Gerardos 24 Stournara Street ATHENS Tel: 36-11-160 Telex: 221871

GUATEMALA

IPESA Avenida Reforma 3-48, Zona 9 GUATEMALA CITY Tel: 316627, 314786 Telex: 4192 TELTRO GU A.CH.CM,CS,E,M,P

HONG KONG

Hewlett-Packard Hong Kong, Ltd. G.P.O. Box 795 5th Floor, Sun Hung Kai Centre 30 Harbour Road HONG KONG

Tel: 5-8323211 Telex: 66678 HEWPA HX Cable: HEWPACK HONG KONG E.CH.CS.P

CET Ltd. 1402 Tung Wah Mansion 199-203 Hennessy Rd. Wanchia, HONG KÓNG Tel: 5-729376 Telex: 85148 CET HX

Schmidt & Co. (Hong Kong) Ltd. Wing On Centre, 28th Floor Connaught Road, C. HONG KONG

Tel: 5-455644 Telex: 74766 SCHMX HX

ICELAND

Elding Trading Company Inc. Hafnarnvoli-Tryggvagotu P.O. Box 895 IS-REYKJAVIK Tel: 1-58-20, 1-63-03

INDIA

Computer products are sold through Blue Star Ltd. All computer repairs and maintenance service is done through Computer Maintenance Corp.

Blue Star Ltd. Sabri Complex II Floor 24 Residency Rd. BANGALORE 560 025 Tel: 55660 Telex: 0845-430 Cable: BLUESTAR

A,CH*,CM,CS*,E

Blue Star Ltd. Band Box House Prabhadevi BOMBAY 400 025 Tel: 422-3101 Telex: 011-3751 Cable: BLUESTAR A.M Blue Star Ltd.

Sahas 414/2 Vir Savarkar Marg Prabhadevi BOMBAY 400 025 Tel: 422-6155 Telex: 011-4093 Cable: FROSTBLUE A,CH*,CM,CS*,E,M

Blue Star Ltd. Kalyan, 19 Vishwas Colony Alkapuri, BORODA, 390 005 Tel: 65235

Cable: BLUE STAR

Blue Star Ltd. 7 Hare Street **CALCUTTA** 700 001 Tel: 12-01-31 Telex: 021-7655

Cable: BLUESTAR A.M Blue Star Ltd.

133 Kodambakkam High Road MADRAS 600 034

Tel: 82057 Telex: 041-379 Cable: BLUESTAR A.M

Blue Star Ltd. Bhandari House, 7th/8th Floors 91 Nehru Place

NEW DELHI 110 024 Tel: 682547 Telex: 031-2463 Cable: BLUESTAR A,CH*,CM,CS*,E,M Blue Star Ltd. 15/16:C Wellesley Rd. **PUNE 411 011**

Tel: 22775 Cable: BLUE STAR

Blue Star Ltd. 2-2-47/1108 Bolarum Rd. SECUNDERABAD 500 003 Tel: 72057

Telex: 0155-459 Cable: BLUEFROST

Blue Star Ltd. T.C. 7/603 Poornima Maruthankuzhi TRIVANDRUM 695 013 Tel: 65799 Telex: 0884-259 Cable: BLUESTAR

Computer Maintenance Corporation Ltd.

115, Sarojini Devi Road SECUNDERABAD 500 003 Tel: 310-184, 345-774 Telex: 031-2960



Arranged alphabetically by country

INDONESIA

BERCA Indonesia P.T. P.O.Box 496/Jkt. Jl. Abdul Muis 62 JAKARTA Tel: 21-373009

Tel: 21-373009 Telex: 46748 BERSAL IA Cable: BERSAL JAKARTA

BERCA Indonesia P.T. P.O.Box 2497/Jkt Anlara Bldg., 17th Floor Jl. Medan Merdeka Selatan 17 JAKARTA-PUSAT Tel: 21:344-181

Tel: 21-344-181 Telex: BERSAL IA A.CS.E.M

BERCA Indonesia P.T. P.O. Box 174/SBY. Jl. Kutei No. 11

SURABAYA Tel: 68172 Telex: 31146 BERSAL SB

Cable: BERSAL-SURABAYA A*,E,M,P

IRAQ

Hewlett-Packard Trading S.A. Service Operation Al Mansoor City 9B/3/7 BAGHDAD Tel: 551-49-73 Telex: 212-455 HEPAIRAQ IK CH,CS

IRELAND

Hewlett-Packard Ireland Ltd. 82/83 Lower Leeson Street DUBLIN 2
Tel: 0001 608800
Telex: 30439
A,CH,CM,CS,E,M,P
Cardiac Services Ltd.
Kilmore Road
Artane
DUBLIN 5
Tel: (01) 351820
Telex: 30439

ISRAEL

Eldan Electronic Instrument Ltd. P.O.Box 1270 JERUSALEM 91000 16, Ohaliav St. JERUSALEM 94467 Tel: 533 221, 553 242 Telex: 25231 AB/PAKRD IL

Electronics Engineering Division Motorola Israel Ltd. 16 Kremenetski Street P.O. Box 25016 TEL-AVIV 67899 Tel: 3 88 388 Telex: 33569 Motil IL Cable: BASTEL Tel-Aviv CH,CM,CS,E,M,P

ITALY

Hewlett-Packard Italiana S.p.A Traversa 99C Via Giulio Petroni, 19 I-70124 BARI Tel: (080) 41-07-44 Hewlett-Packard Italiana S.p.A. Via Martin Luther King, 38/III I-40132 BOLOGNA Tel: (051) 402394 Telex: 511630 CH.E.MS

Hewlett-Packard Italiana S.p.A. Via Principe Nicola 43G/C I-95126 CATANIA Tel: (095) 37-10-87 Telex: 970291

C,P

Hewlett-Packard Italiana S.p.A. Via G. Di Vittorio 9 I-20063 CERNUSCO SUL NAVIGLIO (Milano)

Tel: (02) 923691 Telex: 334632 A,CH,CM,CS,E,MP,P

Hewlett-Packard Italiana S.p.A. Via C. Colombo 49 I-20090 TREZZANO SUL NAVIGLIO (Milano)

Tel: (02) 4459041 Telex: 322116 C,M

Hewlett-Packard Italiana S.p.A. Via Nuova San Rocco a Capodimonte, 62/A I-80131 NAPOLI Tel: (081) 7413544 Telex: 710698 A,CH,E

Hewlett-Packard Italiana S.p.A. Viale G. Modugno 33 I-16156 GENOVA PEGLI Tel: (010) 68-37-07 Telex: 215238 E,C

Hewlett-Packard Italiana S.p.A. Via Pelizzo 15 I-35128 PADOVA Tel: (049) 664888 Telex: 430315 A,CH,E,MS

Hewlett-Packard Italiana S.p.A. Viale C. Pavese 340 I-00144 ROMA EUR Tel: (06) 54831 Telex: 610514 A,CH,CM,CS,E,MS,P* Hewlett-Packard Italiana S.p.A. Via di Casellina 57/C I-50018 SCANDICCI-FIRENZE Tel: (055) 753863

Hewlett-Packard Italiana S.p.A. Corso Svizzera, 185 I-10144 TORINO Tel: (011) 74 4044

Telex: 221079 CH.E

JAPAN

Yokogawa-Hewlett-Packard Ltd. 152-1, Onna ATSUGI, Kanagawa, 243 Tel: (0462) 28-0451 CM,C*,E Yokogawa-Helwett-Packard Ltd.

CM,C*,E
Yokogawa-Helwett-Packard Ltd.
Meiji-Seimei Bldg. 6F
3-1 Hon Chiba-Cho
CHIBA, 280
Tei: 472 25 7701
E,CH,CS

Yokogawa-Hewlett-Packard Ltd. Yasuda-Seimei Hiroshima Bldg. 6-11, Hon-dori, Naka-ku HIROSHIMA, 730 Tel: 82-241-0611

Yokogawa-Hewlett-Packard Ltd. Towa Building

2-3, Kaigan-dori, 2 Chome Chuo-ku **KOBE**, 650

Tel: (078) 392-4791 C.E

Yokogawa-Hewlett-Packard Ltd. Kumagaya Asahi 82 Bldg 3-4 Tsukuba

KUMAGAYA, Saitama 360 Tel: (0485) 24-6563 CH.CM.E

CH,E

Yokogawa-Hewlett-Packard Ltd. Asahi Shinbun Daiichi Seimei Bldg. 4-7, Hanabata-cho KUMAMOTO,860 Tel: (0963) 54-7311

Yokogawa-Hewlett-Packard Ltd. Shin-Kyoto Center Bldg. 614, Higashi-Shiokoji-cho Karasuma-Nishiiru Shiokoji-dori, Shimogyo-ku KYOTO, 600 Tel: 075-343-0921 CH.E

Yokogawa-Hewlett-Packard Ltd. Mito Mitsui Bldg 4-73, Sanno-maru, 1 Chome MITO, Ibaraki 310 Tel: (0292) 25-7470 CH.CM.E

Yokogawa-Hewlett-Packard Ltd. Sumitomo Seimei 14-9 Bldg. Meieki-Minami, 2 Chome Nakamura-ku NAGOYA, 450 Tel: (052) 571-5171 CH,CM.CS.E,MS

Yokogawa-Hewlett-Packard Ltd. Chuo Bldg., 4-20 Nishinakajima, 5 Chome Yodogawa-ku OSAKA, 532 Tel: (06) 304-6021 Telex: YHPOSA 523-3624 A,CH,CM,CS,E,MP,P*

Yokogawa-Hewlett-Packard Ltd. 27-15, Yabe, 1 Chome SAGAMIHARA Kanagawa, 229 Tel: 0427 59-1311

Yokogawa-Hewlett-Packard Ltd. Daiichi Seimei Bldg. 7-1, Nishi Shinjuku, 2 Chome Shinjuku-ku, TOKYO 160 Tel: 03-348-4611 CH.E

Yokogawa-Hewlett-Packard Ltd. 29-21 Takaido-Higashi, 3 Chome Suginami-ku TOKYO 168 Tel: (03) 331-611 Telex: 232-2024 YHPTOK A,CH,CM,CS,E,MP,P* Yokogawa-Hewlett-Packard Ltd. Daiichi Asano Building

Yokogawa-Hewlett-Packard L Daiichi Asano Building 2-8, Odori, 5 Chome UTSUNOMIYA, Tochigi 320 Tel: (0286) 25-7155 CH.CS.E Yokogawa-Hewlett-Packard Ltd. Yasuda Seimei Nishiguchi Bldg. 30-4 Tsuruya-cho, 3 Chome YOKOHAMA 221 Tel: (045) 312-1252 CH,CM,E

JORDAN

Mouasher Cousins Company P.O. Box 1387 AMMAN Tel: 24907, 39907 Telex: 21456 SABCO JO CH.E.M.P

KENYA

ADCOM Ltd., Inc., Kenya P.O.Box 30070 NAIROBI Tel: 331955 Telex: 22639 FM

KOREA

Samsung Electronics HP Division 12 Fl. Kinam Bldg. San 75-31, Yeoksam-Dong Kangnam-Ku Yeongdong P.O. Box 72 SEOUL Tel: 555-7555, 555-5447 Telex: K27364 SAMSAN A.CH.CM.CS.E.M.P

KUWAIT

Al-Khaldiya Trading & Contracting P.O. Box 830 Safat KUWAIT
Tel: 42-4910, 41-1726
Telex: 22481 Areeg kt CH,E,M
Photo & Cine Equipment P.O. Box 270 Safat KUWAIT
Tel: 42-2846, 42-3801
Telex: 22247 Matin kt

LEBANON

G.M. Dolmadjian
Achrafieh
P.O. Box 165.167
BEIRUT
Tel: 290293
MP**
Computer Information Systems
P.O. Box 11-6274
BEIRUT
Tel: 89 40 73
Telex: 22259

LUXEMBOURG

Hewlett-Packard Belgium S.A./N.V. Blvd de la Woluwe, 100 Woluwedal B-1200 BRUSSELS Tel: (02) 762-32-00 Telex: 23-494 paloben bru A,CH,CM,CS,E,MP,P

MALAYSIA

Hewlett-Packard Sales (Malaysia)
Sdn. Bhd.
1st Floor, Bangunan British
American
Jalan Semantan, Damansara Heights
KUALA LUMPUR 23-03
Tel: 943022
Telex: MA31011
A,CH,E,M,P*

MAYLAYSIA (Cont'd)

Protel Engineering P.O.Box 1917 Lot 6624, Section 64 23/4 Pending Road Kuching, SARAWAK Tel: 36299 Telex: MA 70904 PROMAL Cable: PROTELENG

MALTA

Philip Toledo Ltd. Notabile Rd. MRIEHEL Tel: 447 47, 455 66 Telex: Media MW 649

MEXICO

Hewlett-Packard Mexicana, S.A. Av. Periferico Sur No. 6501 Tepepan, Xochimilco 16020 MEXICO D.F. Tel: 6-76-46-00 Telex: 17-74-507 HEWPACK MEX A,CH,CS,E,MS,P Hewlett-Packard Mexicana, S.A. de C.V. Ave. Colonia del Valle 409 Col. del Valle Municipio de Garza Garcia MONTERREY, Nuevo Leon Tel: 78 42 41 Telex: 038 410 CH **ECISA** José Vasconcelos No. 218 Col. Condesa Deleg. Cuauhtémoc MEXICO D.F. 06140 Tel: 553-1206 Telex: 17-72755 ECE ME

MOROCCO

Dolheau 81 rue Karatchi **CASABLANCA** Tel: 3041-82, 3068-38 Telex: 23051, 22822 Gerep

2 rue d'Agadir Boite Postale 156 **CASABLANCA** Tel: 272093, 272095 Telex: 23 739

NETHERLANDS

A,CH,CS,E

Hewlett-Packard Nederland B.V. Van Heuven Goedhartlaan 121 NL 1181KK AMSTELVEEN P.O. Box 667 NL 1 180 AR AMSTELVEEN Tel: (020) 47-20-21 Telex: 13 216 HEPA NL A,CH,CM,CS,E,MP,P Hewlett-Packard Nederland B.V. Bongerd 2 NL 2906VK CAPELLE A/D IJSSEL P.O. Box 41 NL 2900AA CAPELLE A/D IJSSEL Tel: (10) 51-64-44 Telex: 21261 HEPAC NL

Hewlett-Packard Nederland B.V. Pastoor Petersstraat 134-136 NL 5612 LV EINDHOVEN P.O. Box 2342 NL 5600 CH EINDHOVEN Tel: (040) 326911 Telex: 51484 hepae nl A.CH**.E.M

NEW ZEALAND

Hewlett-Packard (N.Z.) Ltd. 5 Owens Road P.O. Box 26-189 Epsom, AUCKLAND Tel: 687-159 Cable: HEWPACK Auckland CH,CM,E,P* Hewlett-Packard (N.Z.) Ltd.

4-12 Cruickshank Street Kilbirnie, WELLINGTON 3 P.O. Box 9443 Courtenay Place, WELLINGTON 3 Tel: 877-199 Cable: HEWPACK Wellington CH,CM.E.P

Northrop Instruments & Systems Ltd. 369 Khyber Pass Road P.O. Box 8602 **AUCKLAND**

Tel: 794-091 Telex: 60605

Northrop Instruments & Systems Ltd. 110 Mandeville St. P.O. Box 8388 **CHRISTCHURCH** Tel: 486-928 Telex: 4203

Northrop Instruments & Systems Ltd. Sturdee House 85-87 Ghuznee Street P.O. Box 2406 WELLINGTON Tel: 850-091 Telex: NZ 3380

NORTHERN IRELAND See United Kingdom

NORWAY

Hewlett-Packard Norge A/S Folke Bernadottes vei 50 P.O. Box 3558 N-5033 FYLLINGSDALEN (Bergen) Tel: 0047/5/16 55 40 Telex: 16621 hpnas n CH,CS,E,MS

Hewlett-Packard Norge A/S Österndalen 16-18 P.O. Box 34 N-1345 ÖSTERÅS Tel: 0047/2/17 11 80 Telex: 16621 hpnas n A,CH,CM,CS,E,M,P

OMAN

Khimjil Ramdas P.O. Box 19 MUSCAT Tel: 722225, 745601 Telex: 3289 BROKER MB MUSCAT

Suhail & Saud Bahwan P.O.Box 169 MUSCAT Tel: 734 201-3 Telex: 3274 BAHWAN MB

PAKISTAN

Mushko & Company Ltd. 1-B. Street 43 Sector F-8/1 ISLAMABAD Tel: 51071 Cable: FEMUS Rawalpindi A.E.M Mushko & Company Ltd.

Oosman Chambers Abdullah Haroon Road KARACHI 0302 Tel: 524131, 524132 Telex: 2894 MUSKO PK Cable: COOPERATOR Karachi A,E,M,P*

PANAMA

Electrónico Balboa, S.A. Calle Samuel Lewis, Ed. Alfa Apartado 4929 PANAMA 5

Tel: 63-6613, 63-6748 Telex: 3483 ELECTRON PG A CM E M.P.

PERU

CMEMP

Cía Electro Médica S.A. Los Flamencos 145, San Isidro Casilla 1030 Tel: 41-4325, 41-3703 Telex: Pub. Booth 25306

PHILIPPINES

The Online Advanced Systems Corporation Rico House, Amorsolo Cor. Herrera Street Legaspi Village, Makati P.O. Box 1510 Metro MANILA Tel: 85-35-81, 85-34-91, 85-32-21 Telex: 3274 ONLINE A,CH,CS,E,M Electronic Specialists and Proponents

690-B Epifanio de los Santos Avenue Cubao, QUEZON CITY P.O. Box 2649 Manila Tel: 98-96-81, 98-96-82, 98-96-83 Telex: 40018, 42000 ITT GLOBE MACKAY BOOTH

PORTUGAL

Mundinter Intercambio Mundial de Comércio S.A.R.L. P.O. Box 2761 Av. Antonio Augusto de Aguiar 138 P-LISBON Tel: (19) 53-2,1-31, 53-21-37 Telex: 16691 munter p

Soquimica Av. da Liberdade, 220-2 1298 LISBOA Codex Tel: 56 21 81/2/3 Telex: 13316 SABASA

Telectra-Empresa Técnica de Equipmentos Eléctricos S.A.R.L. Rua Rodrigo da Fonseca 103 P.O. Box 2531 P-LISBON 1 Tel: (19) 68-60-72 Telex: 12598 CH,CS,E,P

PUERTO RICO

Ave. Muñoz Rivera #101 Esq. Calle Ochoa HATO REY, Puerto Rico 00918 Tel: (809) 754-7800 Hewlett-Packard Puerto Rico Calle 272 Edificio 203 Urb. Country Club
RIO PIEDRAS, Puerto Rico P.O. Box 4407 CAROLINA, Puerto Rico 00628 Tel: (809) 762-7255 A,CH,CS

Hewlett-Packard Puerto Rico

QATAR

Computearbia P.O. Box 2750 DOHA Tel: 883555 Telex: 4806 CHPARB

Eastern Technical Services P.O.Box 4747 DOHA Tel: 329 993 Telex: 4156 EASTEC DH

Nasser Trading & Contracting P.O.Box 1563 DOHA

Tel: 22170, 23539 Telex: 4439 NASSER DH

SAUDI ARABIA

Modern Electronic Establishment Hewlett-Packard Division P.O. Box 22015 Thuobah AL-KHOBAR

Tel: 895-1760, 895-1764 Telex: 671 106 HPMEEK SJ Cable: ELECTA AL-KHOBAR CH,CS,E,M

Modern Electronic Establishment Hewlett-Packard Division P.O. Box 1228 Redec Plaza, 6th Floor JEDDAH

Tel: 644 38 48

Telex: 4027 12 FARNAS SJ Cable: ELECTA JEDDAH CH,CS,E,M

Modern Electronic Establishment Hewlett-Packard Division P.O.Box 22015 RIYADH

Tel: 491-97 15, 491-63 87

Telex: 202049 MEERYD SJ CH,CS,E,M

Abdul Ghani El Ajou P.O. Box 78 RIYADH Tel: 40 41 717 Telex: 200 932 EL AJOU

SCOTLAND

See United Kingdom

SINGAPORE

Hewlett-Packard Singapore (Sales) Pte. Ltd. #08-00 Inchcape House 450-2 Alexandra Road P.O. Box 58 Alexandra Rd. Post Office SINGAPORE, 9115 Tel: 631788 Telex: HPSGSO RS 34209 Cable: HEWPACK, Singapore A.CH.CS.E.MS.P



Arranged alphabetically by country

SINGAPORE (Cont'd)

Dynamar International Ltd. Unit 05-11 Block 6 Kolam Ayer Industrial Estate SINGAPORE 1334 Tel: 747-6188 Telex: RS 26283

SOUTH AFRICA

Hewlett-Packard So Africa (Pty.) Ltd. P.O. Box 120 Howard Place CAPE PROVINCE 7450 Pine Park Center, Forest Drive, Pinelands

CAPE PROVINCE 7405 Tel: 53-7954 Telex: 57-20006 A,CH,CM,E,MS,P

Hewlett-Packard So Africa (Ptv.) Ltd. P.O. Box 37099 92 Overport Drive

DURBAN 4067 Tel: 28-4178, 28-4179, 28-4110 Telex: 6-22954 CH,CM

Hewlett-Packard So Africa (Pty.) Ltd. 6 Linton Arcade 511 Cape Road Linton Grange **PORT ELIZABETH 6000**

Tel: 041-302148

Hewlett-Packard So Africa (Pty.) Ltd. P.O.Box 33345 Glenstantia 0010 TRANSVAAL 1st Floor East Constantia Park Ridge Shopping Centre Constantia Park **PRETORIA**

Tel: 982043 Telex: 32163 CH.E

Hewlett-Packard So Africa (Pty.) Ltd. Private Bag Wendywood SANDTON 2144 Tel: 802-5111, 802-5125 Telex: 4-20877 Cable: HEWPACK Johannesburg A,CH,CM,CS,E,MS,P

Hewlett-Packard Española S.A. Calle Entenza, 321 E-BARCELONA 29 Tel: 322.24.51, 321.73.54 Telex: 52603 hpbee A,CH,CS,E,MS,P Hewlett-Packard Española S.A. Calle San Vicente S/No Edificio Albia II

E-BILBAO 1 Tel: 423.83.06 A,CH,E,MS

Hewlett-Packard Española S.A. Crta. de la Coruña, Km. 16, 400 Las Rozas

F-MADRID Tel: (1) 637.00.11

CH CS M Hewlett-Packard Española S.A. Avda. S. Francisco Javier, S/no Planta 10. Edificio Sevilla 2,

E-SEVILLA 5 Tel: 64.44.54 Telex: 72933 A,CS,MS,P

Hewlett-Packard Española S.A. Calle Ramon Gordillo, 1 (Entlo.3) E-VALENCIA 10 Tel: 361-1354 CH.P

SWEDEN

Hewlett-Packard Sverige AB Sunnanvagen 14K S-22226 LUND Tel: (046) 13-69-79 Telex: (854) 17886 (via Spånga office) CH

Hewlett-Packard Sverige AB Östra Tullgatan 3 S-21128 MALMÖ Tel: (040) 70270 Telex: (854) 17886 (via Spånga office)

Hewlett-Packard Sverige AB Våstra Vintergatan 9 S-70344 ÖREBRO Tel: (19) 10-48-80 Telex: (854) 17886 (via Spånga

office) CH Hewlett-Packard Sverige AB

Skalholtsgatan 9, Kista Box 19 S-16393 **SPÅNGA** Tel: (08) 750-2000 Telex: (854) 17886

Telefax: (08) 7527781 A,CH,CM,CS,E,MS,P Hewlett-Packard Sverige AB

Frötallisgatan 30 S-42132 VÄSTRA-FRÖLUNDA Tel: (031) 49-09-50 Telex: (854) 17886 (via Spånga office) CH.E.P

SWITZERLAND

Hewlett-Packard (Schweiz) AG Clarastrasse 12 CH-4058 BASEL Tel: (61) 33-59-20

Hewlett-Packard (Schweiz) AG 7, rue du Bois-du-Lan Case Postale 365 CH-1217 MEYRIN 2 Tel: (0041) 22-83-11-11 Telex:27333 HPAG CH CH.CM.CS

Hewlett-Packard (Schweiz) AG Allmend 2 CH-8967 WIDEN Tel: (0041) 57 31 21 11 Telex: 53933 hpag ch Cable: HPAG CH

A,CH,CM,CS,E,MS,P

General Electronic Inc. Nuri Basha Ahnaf Ebn Kays Street P.O. Box 5781 **DAMASCUS** Tel: 33-24-87 Telex: 411 215 Cable: ELECTROBOR DAMASCUS

Middle East Electronics P O Rox 2308 Abu Rumnaneh DAMASCUS Tel: 33 4 5 92 Telex: 411 304

TAIWAN

Kaohsiung Office 2/F 68-2, Chung Cheng 3rd Road KAOHSIUNG Tel: (07) 241-2318 CH,CS,E Hewlett-Packard Far East Ltd. Taiwan Branch 8th Floor 337 Fu Hsing North Road TAIPEI Tel: (02) 712-0404 Telex: 24439 HEWPACK Cable:HEWPACK Taipei

Hewlett-Packard Far East Ltd.

A,CH,CM,CS,E,M,P Ing Lih Trading Co. 3rd Floor, 7 Jen-Ai Road, Sec. 2 TAIPEI 100

Tel: (02) 3948191 Cable: INGLIH TAIPEI

THAILAND

Unimesa 30 Patpong Ave., Suriwong BANGKOK 5 Tel: 235-5727 Telex: 84439 Simonco TH Cable: UNIMESA Banakok

A.CH.CS.E.M Bangkok Business Equipment Ltd. 5/5-6 Dejo Road BANGKOK

Tel: 234-8670, 234-8671 Telex: 87669-BEQUIPT TH Cable: BUSIQUIPT Bangkok

TRINIDAD & TOBAGO

Caribbean Telecoms Ltd. 50/A Jerningham Avenue P.O. Box 732 PORT-OF-SPAIN Tel: 62-44213, 62-44214 Telex: 235,272 HUGCO WG CM,E,M,P

TUNISIA

Tunisie Electronique 31 Avenue de la Liberte **TUNIS** Tel: 280-144 E.P Corema 1 ter. Av. de Carthage **TUNIS** Tel: 253-821 Telex: 12319 CABAM TN

TURKEY

Teknim Company Ltd. Iran Caddesi No. 7 Kavaklidere, ANKARA Tel: 275800 Telex: 42155 TKNM TR E.M.A. Medina Eldem Sokak No.41/6 Yuksel Caddesi ANKARA Tel: 175 622 Telex: 42 591

UNITED ARAB EMIRATES Emitac Ltd.

P.O. Box 2711 ABU DHARI Tel: 82 04 19-20 Cable: EMITAC ABUDHABI Emitac Ltd. P.O. Box 1641 SHARJAH Tel: 591 181 Telex: 68136 Emitac Sh CH.CS.E.M.P.

UNITED KINGDOM

GREAT BRITAIN

Hewlett-Packard Ltd. Trafalgar House **Navigation Road** ALTRINCHAM Cheshire WA14 1NU Tel: 061 928 6422 Telex: 668068 A,CH,CS,E,M,MS,P Hewlett-Packard Ltd. Elstree House, Elstree Way BOREHAMWOOD, Herts WD6 1SG Tel: 01 207 5000 Telex: 8952716 E.CH.CS.P

Hewlett-Packard Ltd. Oakfield House, Oakfield Grove Clifton BRISTOL, Avon BS8 2BN Tel: 0272 736806 Telex: 444302 CH,CS,E,P Hewlett-Packard Ltd. **Bridewell House** Bridewell Place **LONDON EC4V 6BS**

Tel: 01 583 6565 Telex: 298163 CH.CS.P Hewlett-Packard Ltd. Fourier House 257-263 High Street

LONDON COLNEY Herts. AL2 1HA, St. Albans Tel: 0727 24400 Telex: 1-8952716

CH,CS Hewlett-Packard Ltd. Pontefract Road

NORMANTON, West Yorkshire WF6 1RN Tel: 0924 895566

Telex: 557355 CH,CS,P Hewlett-Packard Ltd. The Quadrangle

106-118 Station Road REDHILL, Surrey RH1 1PS Tel: 0737 68655 Telex: 947234 CH,CS,E,P

Arranged alphabetically by country

GREAT BRITAIN (Cont'd)

Hewlett-Packard Ltd.
Avon House
435 Stratford Road
Shirley, SOLIHULL, West Midlands
B90 4BL
Tel: 021 745 8800
Telex: 339 105
CH,CS,E,P

Hewlett-Packard Ltd. West End House 41 High Street, West End SOUTHAMPTON Hampshire S03 3DQ Tel: 04218 6767 Telex: 477138 CH.CS.P

Hewlett-Packard Ltd. Eskdale Rd. Winnersh, WOKINGHAM Berkshire RG11 5DZ Tel: 0734 696622 Telex: 848884 E

Hewlett-Packard Ltd.
King Street Lane
Winnersh, WOKINGHAM
Berkshire RG11 5AR
Tel: 0734 784774
Telex: 847178
A,CH,CS,E,M,MP,P
Hewlett-Packard Ltd.
Nine Mile Ride
Easthampstead, WOKINGHAM
Berkshire, 3RG11 3LL
Tel: 0344 773100
Telex: 848805
CH,CS,E,P

IRELAND

NORTHERN IRELAND

Hewlett-Packard Ltd. Cardiac Services Building 95A Finaghy Road South BELFAST BT10 0BY Tel: 0232 625-566 Telex: 747626 CH,CS

SCOTLAND

Hewlett-Packard Ltd. SOUTH QUEENSFERRY West Lothian, EH30 9TG Tel: 031 331 1188 Telex: 72682 CH,CM,CS,E,M,P

UNITED STATES

Alabama

Hewlett-Packard Co. 700 Century Park South, Suite 128 BIRMINGHAM, AL 35226 Tel: (205) 822-6802 A,CH,M Hewlett-Packard Co.

420 Wynn Drive HUNTSVILLE, AL 35805 P.O. Box 7700 HUNTSVILLE, AL 35807 Tel: (205) 830-2000 CH,CM,CS,E,M*

Arizona

Hewlett-Packard Co. 8080 Pointe Parkway West PHOENIX, AZ 85044 Tel: (602) 273-8000 A,CH,CM,CS,E,MS Hewlett-Packard Co. 2424 East Aragon Road TUCSON, AZ 85706 Tel: (602) 889-4631 CH,E,MS**

California

Hewlett-Packard Co. 99 South Hill Dr. BRISBANE, CA 94005 Tel: (415) 330-2500 CH,CS

Hewlett-Packard Co. P.O. Box 7830 (93747) 5060 E. Clinton Avenue, Suite 102 FRESNO, CA 93727 Tel: (209) 252-9652 CH,CS,MS

Hewlett-Packard Co. P.O. Box 4230 1430 East Orangethorpe FULLERTON, CA 92631 Tel: (714) 870-1000 CH,CM,CS,E,MP Hewlett-Packard Co. 320 S. Kellogg, Suite B GOLETA, CA 93117 Tel: (805) 967-3405 CH

Hewlett-Packard Co. 5400 W. Rosecrans Boulevard LAWNDALE, CA 90260 P.O. Box 92105 LOS ANGELES, CA 90009 Tel: (213) 970-7500 Telex: 910-325-6608 CH,CM,CS,MP

Hewlett-Packard Co. 3155 Porter Oaks Drive PALO ALTO, CA 94304 Tel: (415) 857-8000 CH,CS,E

CH,CS,E
Hewlett-Packard Co.
4244 So. Market Court, Suite A
P.O. Box 15976
SACRAMENTO, CA 95852
Tel: (916) 929-7222
A*,CH,CS,E,MS
Hewlett-Packard Co.
9606 Aero Drive
P.O. Box 23333
SAN DIEGO, CA 92139

Tel: (619) 279-3200 CH,CM,CS,E,MP Hewlett-Packard Co. 2305 Camino Ramon "C" SAN RAMON, CA 94583

SAN RAMON, CA 94583 Tel: (415) 838-5900 CH,CS

Hewlett-Packard Co.

3005 Scott Boulevard SANTA CLARA, CA 95050 Tel: (408) 988-7000 Telex: 910-338-0586 A,CH,CM,CS,E,MP Hewlett-Packard Co. 5703 Corsa Avenue WESTLAKE VILLAGE, CA 91362 Tel: (213) 706-6800

E*,CH*,CS* Colorado

Hewlett-Packard Co. 24 Inverness Place, East ENGLEWOOD, CO 80112 Tel: (303) 649-5000 A,CH,CM,CS,E,MS

Connecticut

Hewlett-Packard Co. 47 Barnes Industrial Road South P.O. Box 5007 WALLINGFORD, CT 06492 Tel: (203) 265-7801 A.CH.CM.CS.E.MS

Florida

Hewlett-Packard Co. 2901 N.W. 62nd Street P.O. Box 24210 FORT LAUDERDALE, FL 33307 Tel: (305) 973-2600 CH,CS,E,MP

Hewlett-Packard Co.
6177 Lake Ellenor Drive
P.O. Box 13910
ORLANDO, FL 32859
Tel: (305) 859-2900
A,CH,CM,CS,E,MS
Hewlett-Packard Co.
5750B N. Hoover Blvd., Suite 123
P.O. Box 15200
TAMPA El 33614

5750B N. Hoover Blvd., Suite 12 P.O. Box 15200 TAMPA, FL 33614 Tel: (813) 884-3282 A*,CH,CM,CS,E*,M*

Georgia

Hewlett-Packard Co. 2000 South Park Place P.O. Box 105005 ATLANTA, GA 30348 Tel: (404) 955-1500 Telex: 810-766-4890 A,CH,CM,CS,E,MP

Hawaii

Hewlett-Packard Co. Kawaiahao Plaza, Suite 190 567 South King Street HONOLULU, HI 96813 Tel: (808) 526-1555 A,CH,E,MS

Illinois

Hewlett-Packard Co. 304 Eldorado Road P.O. Box 1607 BLOOMINGTON, IL 61701 Tel: (309) 662-9411 CH,MS** Hewlett-Packard Co.

1100 31st Street, Suite 100 **DOWNERS GROVE**, IL 60515 Tel: (312) 960-5760 CH,CS

Hewlett-Packard Co. 5201 Tollview Drive ROLLING MEADOWS, IL 60008 Tel: (312) 255-9800 Telex: 910-687-1066 A,CH,CM,CS,E,MP

Indiana

Hewlett-Packard Co. 7301 No. Shadeland Avenue P.O. Box 50807 INDIANAPOLIS, IN 46250 Tel: (317) 842-1000 A,CH,CM,CS,E,MS

lowa

Hewlett-Packard Co. 1776 22nd Street, Suite 1 WEST DES MOINES, IA 50265 Tel: (515) 224-1435 CH.MS**

Kansas

Hewlett-Packard Co. 7804 East Funston Road, #203 WICHITA, KS 67207 Tel. (316) 684-8491 CH

Kentucky

Hewlett-Packard Co. 10300 Linn Station Road, #100 LOUISVILLE, KY 40223 Tel: (502) 426-0100 A.CH.CS.MS

Louisiana

Hewlett-Packard Co. 160 James Drive East ST. ROSE, LA 70087 P.O. Box 1449 KENNER, LA 70063 Tel: (504) 467-4100 A.CH.CS.E.MS

Maryland

Hewlett-Packard Co. 3701 Koppers Street BALTIMORE, MD 21227 Tel: (301) 644-5800 Telex: 710-862-1943 A,CH,CM,CS,E,MS Hewlett-Packard Co. 2 Choke Cherry Road ROCKVILLE, MD 20850 Tel: (301) 948-6370 A,CH,CM,CS,E,MP

Massachusetts

Hewlett-Packard Co. 1775 Minuteman Road ANDOVER, MA 01810 Tel: (617) 682-1500 A,C,CH,CS,CM,E,MP,P* Hewlett-Packard Co. 32 Hartwell Avenue LEXINGTON, MA 02173 Tel: (617) 861-8960

CH,CS,E Michigan

Hewlett-Packard Co. 4326 Cascade Road S.E. GRAND RAPIDS, MI 49506 Tel: (616) 957-1970 CH,CS,MS

Hewlett-Packard Co. 1771 W. Big Beaver Road TROY, MI 48084 Tel: (313) 643-6474 CH.CS

Minnesota

Hewlett-Packard Co. 2025 W. Larpenteur Ave. ST. PAUL, MN 55113 Tel: (612) 644-1100 A,CH,CM,CS,E,MP

Missouri

Hewlett-Packard Co. 11131 Colorado Avenue KANSAS CITY, MO 64137 Tel: (816) 763-8000 A,CH,CM,CS,E,MS Hewlett-Packard Co. 13001 Hollenberg Drive BRIDGETON, MO 63044 Tel: (314) 344-5100 A,CH,CS,E,MP



Arranged alphabetically by country

UNITED STATES (Cont'd)

Nebraska

Hewlett-Packard 10824 Old Mill Rd., Suite 3 0MAHA, NE 68154 Tel: (402) 334-1813 CM,MS

New Jersey

Hewlett-Packard Co. 120 W. Century Road PARAMUS, NJ 07652 Tel: (201) 265-5000 A,CH,CM,CS,E,MP

Hewlett-Packard Co. 60 New England Av. West PISCATAWAY, NJ 08854 Tel: (201) 981-1199 A,CH,CM,CS,E

New Mexico

New Medico 11300 Lomas Blvd.,N.E. P.O. Box 11634 ALBUQUERQUE, NM 87112 Tel: (505) 292-1330 CH,CS,E,MS

New York

Hewlett-Packard Co. 5 Computer Drive South ALBANY, NY 12205 Tel: (518) 458-1550 A,CH,E,MS

Hewlett-Packard Co. 9600 Main Street P.O. Box AC CLARENCE, NY 14031 Tel: (716) 759-8621 CH

Hewlett-Packard Co. 200 Cross Keys Office Park FAIRPORT, NY 14450 Tel: (716) 223-9950 CH,CM,CS,E,MS Hewlett-Packard Co. 7641 Henry Clay Blvd. LIVERPOOL, NY 13088 Tel: (315) 451-1820 A,CH,CM,E,MS

Hewlett-Packard Co. No. 1 Pennsylvania Plaza 55th Floor 34th Street & 8th Avenue MANHATTAN NY 10119 Tel: (212) 971-0800 CH,CS,E*,M*

Hewlett-Packard Co. 250 Westchester Avenue WHITE PLAINS, NY 10604 Tel: (914) 684-6100 CM,CH,CS,E

Hewlett-Packard Co. 3 Crossways Park West WOODBURY, NY 11797 Tel: (516) 921-0300 A.CH.CM.CS.E.MS

North Carolina

Hewlett-Packard Co. 5605 Roanne Way P.O. Box 26500 GREENSBORO, NC 27420 Tel: (919) 852-1800 A,CH,CM,CS,E,MS Ohio

Hewlett-Packard Co. 9920 Carver Road CINCINNATI, OH 45242 Tel: (513) 891-9870 CH,CS,MS

Hewlett-Packard Co. 16500 Sprague Road CLEVELAND, OH 44130 Tel: (216) 243-7300 A,CH,CM,CS,E,MS Hewlett-Packard Co. 962 Crupper Ave. COLUMBUS, OH 43229 Tel: (614) 436-1041 Eff: Nov. 25, 1983 675 Brooksedge Blvd. WESTERVILLE, OH 43081

Hewlett-Packard Co. 330 Progress Rd. DAYTON, OH 45449 Tel: (513) 859-8202 A,CH,CM,E*,MS

Okiahoma

CH,CM,CS,E

Hewlett-Packard Co. 304 N. Meridian, Suite A P.O. Box 75609 OKLAHOMA CITY, OK 73147 Tel: (405) 946-9499 A*,CH,E*,MS Hewlett-Packard Co. 3840 S. 103rd E. Avenue, #100 P.O. Box 35747 TULSA, OK 74153 Tel: (918) 665-3300 A**,CH,CS,M*

Oregon

Hewlett-Packard Co. 9255 S. W. Pioneer Court P.O. Box 328 WILSONVILLE, OR 97070 Tel: (503) 682-8000 A,CH,CS,E*,MS

Pennsylvania

Hewlett-Packard Co. 111 Zeta Drive PITTSBURGH, PA 15238 Tel: (412) 782-0400 A,CH,CS,E,MP Hewlett-Packard Co. 2750 Monroe Boulevard P.O. Box 713 VALLEY FORGE, PA 19482 Tel: (215) 666-9000 A,CH,CM,E,M

South Carolina

Hewlett-Packard Co. Brookside Park, Suite 122 1 Harbison Way P.O. Box 21708 COLUMBIA, SC 29221 Tel: (803) 732-0400 CH,E,MS

Hewlett-Packard Co. Koger Executive Center Chesterfield Bldg., Suite 124 GREENVILLE, SC 29615 Tel: (803) 297-4120

Tennessee

Hewlett-Packard Co. 224 Peters Road, Suite 102 P.O. Box 22490 KNOXVILLE, TN 37922 Tel: (615) 691-2371 A*,CH,MS Hewlett-Packard Co. 3070 Directors Row MEMPHIS, TN 38131 Tel: (901) 346-8370 A,CH,MS

Texas

Hewlett-Packard Co. 4171 North Mesa Suite C-110 EL PASO, TX 79902 Tel: (915) 533-3555 CH,E*,MS** Hewlett-Packard Co.

10535 Harwin Drive P.O. Box 42816 HOUSTON, TX 77042 Tel: (713) 776-6400 A,CH,CM,CS,E,MP Hewlett-Packard Co. 930 E. Campbell Rd. P.O. Box 1270

RICHARDSON, TX 75080 Tel: (214) 231-6101 A,CH,CM,CS,E,MP

Hewlett-Packard Co. 1020 Central Parkway South P.O. Box 32993 SAN ANTONIO, TX 78216 Tel: (512) 494-9336 CH,CS,E,MS

Utah

Hewlett-Packard Co. 3530 W. 2100 South SALT LAKE CITY, UT 84119 Tel: (801) 974-1700 A,CH,CS,E,MS

Virginia

Hewlett-Packard Co. 4305 Cox Road GLEN ALLEN, VA 23060 P.O. Box 9669 RICHMOND, VA 23228 Tel: (804) 747-7750 A,CH,CS,E,MS

Washington

Hewlett-Packard Co. 15815 S.E. 37th Street BELLEVUE, WA 98006 Tel: (206) 643-4000 A,CH,CM,CS,E,MP Hewlett-Packard Co. Suite A 708 North Argonne Road SPOKANE, WA 99212 Tel: (509) 922-7000 CH.CS

West Virginia
Hewlett-Packard Co.

4604 MacCorkle Ave. P.O. Box 4297 CHARLESTON, WV 25304 Tel: (304) 925-0492 A,MS

Wisconsin

Hewlett-Packard Co. 150 S. Sunny Slope Road BROOKFIELD, WI 53005 Tel: (414) 784-8800 A,CH,CS,E*,MP URUGUAY

Pablo Ferrando S.A.C. e I. Avenida Italia 2877 Casilla de Correo 370 MONTEVIDEO Tel: 80-2586 Telex: Public Booth 901 A,CM,E,M

VENEZUELA

Hewlett-Packard de Venezuela C.A. 3RA Transversal Los Ruices Norte Edificio Segre 1, 2 & 3 Apartado 50933 CARACAS 1071 Tel: 239-4133 Telex: 251046 HEWPACK A,CH,CS,E,MS,P

Hewlett-Packard de Venezuela C.A. Calle-72-Entre 3H y 3Y, No. 3H-40 Edificio Ada-Evelyn, Local B Apartado 2646 4001, MARACAIBO, Estado Zulia Tel: (061) 80.304 C.E*

Hewlett-Packard de Venezuela C.A. Calle Vargas Rondon Edificio Seguros Carabobo, Piso 10 VALENCIA

Tel: (041) 51 385 CH.CS.P

Bioelectronica Medica C.A.
Calle Buen Pastor
Edif. Cota Mil-Piso 2 y Semi Sotano 1
Boleita Norte
Apartado 50710 CARACAS 1050A
Tel: 239 84 41
Telex: 26518

ZIMBABWE

Field Technical Sales 45 Kelvin Road, North P.B. 3458 SALISBURY Tel: 705 231 Telex: 4-122 RH C.E.M.P

July 1983

5952-6900

Indicates main office

HP distributors are printed in italics.